



CITY OF RED BLUFF

555 Washington Street Post Office Box 400 Red Bluff, California 96080 (916) 527-2605

GENERAL PLAN

1991 CIRCULATION ELEMENT

1992 HOUSING ELEMENT

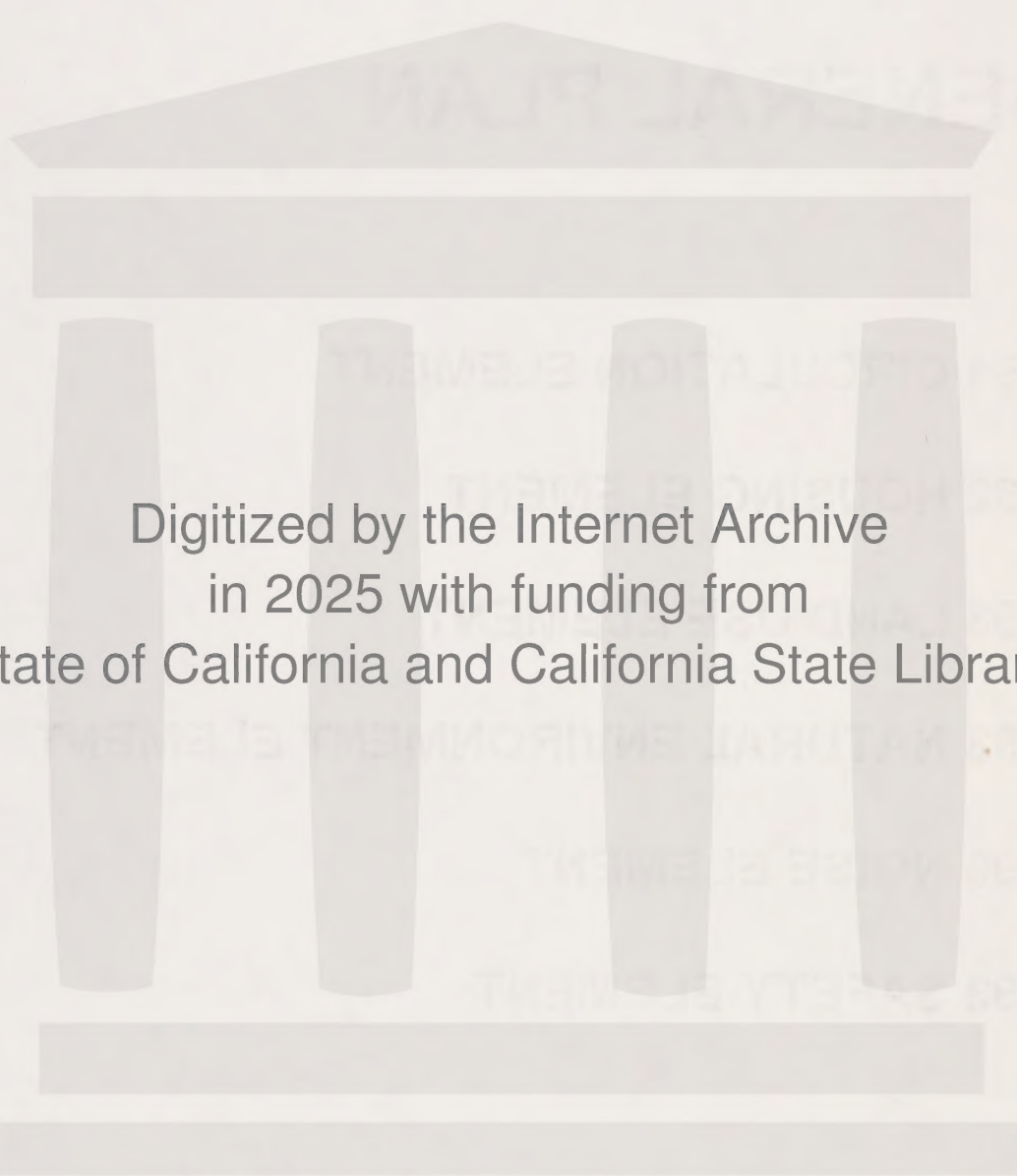
1993 LAND USE ELEMENT

1993 NATURAL ENVIRONMENT ELEMENT

1993 NOISE ELEMENT

1993 SAFETY ELEMENT

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RESOLUTION NO. 29-1991

A RESOLUTION ADOPTING GENERAL PLAN AMENDMENT NO. 18, UPDATED
CIRCULATION ELEMENT

WHEREAS, an updated Circulation Element of the General Plan has been prepared, and

WHEREAS, the Planning Commission did complete the necessary studies relating to the updated Circulation Element and recommended its adoption,

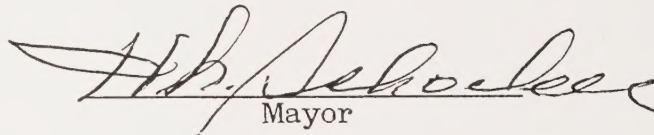
NOW, THEREFORE BE IT RESOLVED that the 1991 Circulation Element, Exhibit "A" attached is hereby adopted.

The foregoing resolution was adopted at a regular meeting of the City Council of the City of Red Bluff, held on September 3, 1991 by the following vote:

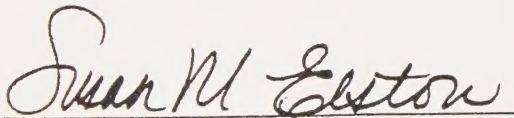
AYES: Councilmembers: Sale, Anderson, Trujillo, Wintle, and Schoelen.

NOES: None.

ABSENT OR NOT VOTING: None.


Mayor

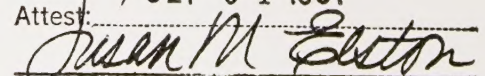
ATTEST:


City Clerk

This is to certify that the annexed document is a true and correct copy of the original on file in my office.

Attest:

SEP 04 1991



SUSAN M. ELSTON, City Clerk
City of Red Bluff
County of Tehama, State of California

EXHIBIT A

RESOLUTION 29-1991

**CITY OF RED BLUFF
GENERAL PLAN
1991 CIRCULATION ELEMENT**

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Adoption and Revisions:

Completed by Celia Modeste McAdams, University Foundation,
California State University, Chico, March 1991.

Adopted by Planning Commission August 13, 1991.

Adopted by City Council September 3, 1991 Resolution No. 29-1991.

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CIRCULATION ELEMENT INTENT

The intent of the Circulation Element of the General Plan is to provide for the efficient transportation of people and goods throughout the Red Bluff Sphere of Influence. To that aim, the Circulation Element contains goals, objectives, policies, and programs designed to maintain and improve circulation. In addition, it contains an assessment of the current circulation conditions in the area and provides recommendations for improvements to the transportation systems anticipated as being required based on the Land Use map included in the General Plan.

It is also the intent of this element to be integrated with the overall General Plan, as other elements must be considered as having strong interrelationships with circulation. Vehicular, rail and air traffic are significant generators of noise in the Red Bluff area. For this reason, noise considerations are part of this Circulation Element.

Land use and circulation are also interlinked by the primary need for circulation results from disparate locations of needed land uses. To illustrate, if one lived adjacent to his place of work and in close proximity to shopping, then one's demand for circulation is significantly reduced. Mixed and integrated land uses are considered mitigations for circulation impacts. For that reason, blended land uses are part of the Circulation Element.

Housing is also interrelated with circulation. The location, density, and buildout volumes are prime factors in determining circulation system needs. Accurate determination of housing needs, coupled with the intelligent location of such, can minimize demands on a circulation system. For this reason, housing is included in the Circulation Element.

Safety is another element vitally linked to circulation. Safety services, such as police, fire, and ambulance, require a circulation system adequate to

gain access to victims or put out fires, wherever they may be. Likewise, hazardous substances are transported on circulation systems and must be considered. For these reasons, safety is addressed in the Circulation Element.

EXISTING CONDITIONS

The City of Red Bluff is served by an extensive network of various types of roadways, as defined by the 1985 Highway Capacity Manual. These include:

- FREEWAY:** Characterized by high speed and limited and controlled access, freeways primarily serve regional and long distance travel.
- RURAL HIGHWAY:** Rural highways are generally higher speed, medium capacity two-lane roadways with one lane for travel in each direction. Passing of slower vehicles requires the use of the opposing lane where traffic gaps allow. Undivided multi-lane highways without full control of access as found in freeways may also be classified as rural highways.
- ARTERIAL:** Major: These streets are generally higher speed, higher capacity transportation corridors that link the community with highways and freeways.
Minor: Medium speed and medium capacity, these roads are principally for travel between larger land uses within the community.
- COLLECTOR:** Relatively low speed and low capacity, collector streets are generally two lanes connecting neighborhoods with other neighborhoods as well as with the arterial system.

LOCAL STREET: Local streets are low speed, low capacity streets that provide direct access to adjacent land uses and are typically meant only for local, as opposed to through, traffic.

Source: Highway Capacity Manual (1985), p. 8-2.

Table 1 shows the designations for all freeway, rural highway, arterial, and collector roadways in the Red Bluff area. A graphic illustration of the roadway system is shown in Figure 1.

TABLE 1

ROADWAY CATEGORIES

<u>Street Name</u>	<u>Frwy</u>	<u>Rural Hwy</u>	<u>Arterial</u>	<u>Collector</u>
Adobe Road				X
Airport Boulevard				X
Aloha Street.....				X
Antelope Boulevard.....			1	
Baker Road			2	
Breckenridge Street				X
Chestnut Avenue				X
David Avenue				X
Diamond Avenue.....				X
Gilmore Road				X
Highway 36 E (Antelope Blvd) .. X.....		1		
Highway 36 W (Beegum Road) X.....			1	
Hoy Road				X
Interstate 5	X			
Jackson Street (Walnut St.to Reeds Creek) 2				
Johnson Street (Walnut St. to Breckenridge St)				X
Kimball Road				X
Luther Road.....			2	
Madison Street (North of Walnut St. future collector)				X
Madison Street (Walnut St. to Willow St.)				X
Main Street (North of Antelope Blvd)			1	
Main Street (South of Antelope Blvd)			2	
Mill Street.....				X
Monroe Street and Avenue (North of Walnut St.)				X
Montgomery Road (North of Kimball Rd)			X	
Mulberry Avenue				X
Oak Street (between Jackson St. and Main St.).....			2	
Park Avenue				X
Paskenta Road.....			2	
Philbrook Avenue.....				X
Reeds Avenue				X
Rio Street (Antelope Blvd. to Cedar St.)				X
Sale Lane				X
South Jackson Street (Reeds Creek to Luther Rd.)			2	
South Jackson Street (South of Luther Road).....				X
Trinity Avenue.....				X
Walnut Street.....			2	
Walton Avenue.....				X
Williams Avenue				X
Willow Street				X
Vista Way				X

1 = Major arterial

2 = Minor arterial





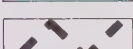
Source: Regional Transportation Plan for Tehama County, pg. M-2 as modified by the City.

City of Red Bluff

General Plan Amendment N.18

1991 Circulation Element



-  Interstate 5
-  Major Arterial
-  Minor Arterial
-  Collector
-  Future

CSU Chico
Geography Department
April 18, 1992

The circulation system of Red Bluff encompasses a great many transportation methods and facilities. The facilities hierarchy includes Interstate 5, state highways, local roadways, intersections, and parking, while other circulation methods include rail, truck, public, bicycle and air transportation.

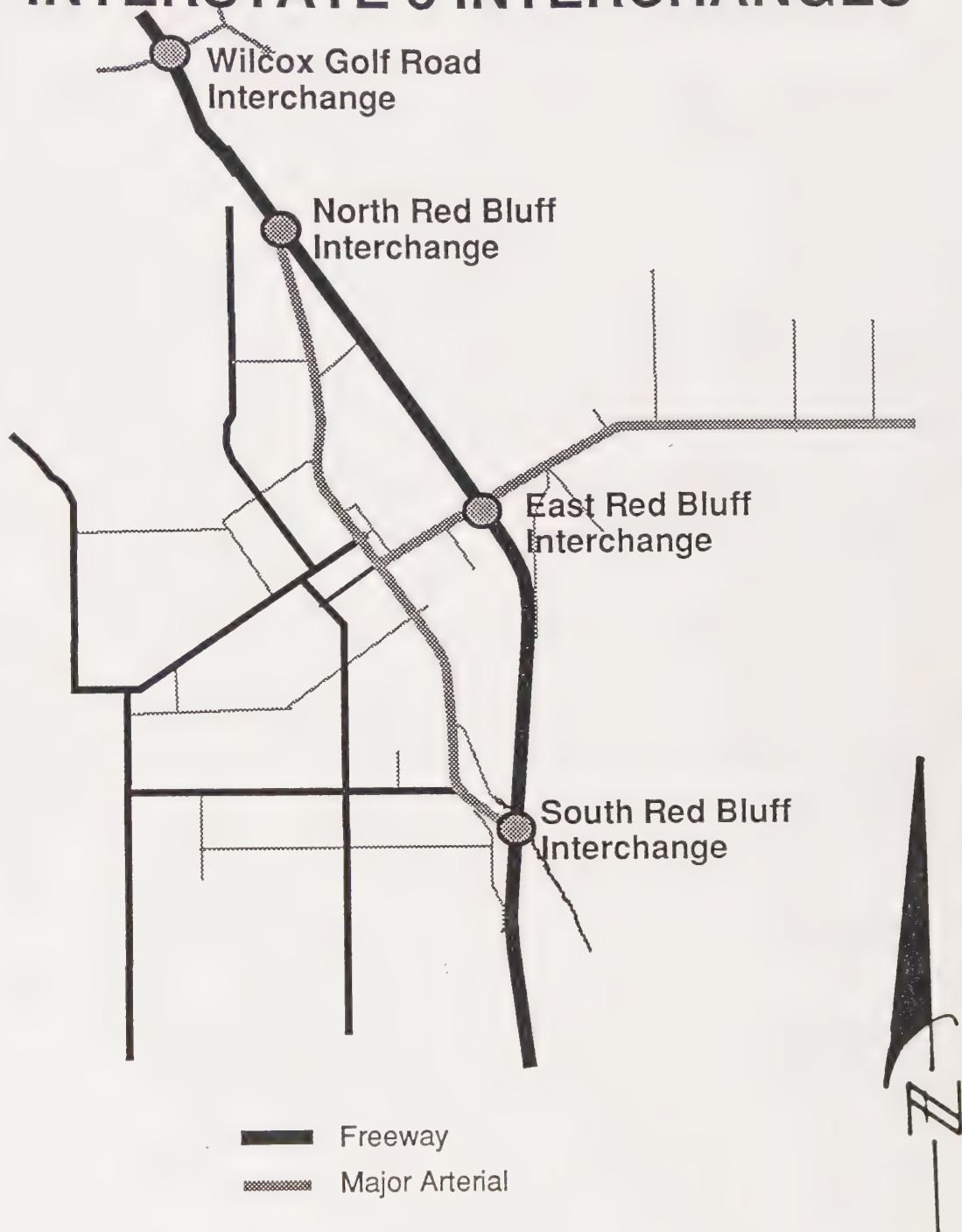
INTERSTATE 5

It connects Red Bluff north to the regional center of Redding and south to the major metropolitan area of Sacramento. There are four points of access to the interstate from Red Bluff (see Figure 2):

- The South Red Bluff Interchange and Diamond Avenue separation, located south of the city center east of the airport, is configured in two parts due to a Southern Pacific Railroad underpass along the freeway. This interchange allows northbound traffic to exit Interstate 5 onto Old Highway 99 and southbound traffic to exit Interstate 5 either onto Diamond Avenue or onto Old Highway 99. Entering the freeway, it is possible to travel north or southbound from Old Highway 99 but only northbound from Diamond Avenue. This interchange is significant for traffic destined for the industrial and commercial areas in the southern portion of the City.
- The East Red Bluff Interchange, located just east of the downtown area, is the main interchange in Red Bluff. It is a full cloverleaf configuration, allowing traffic to enter and exit the freeway in any combination of origin and destination. This interchange is heavily used by traffic originating or destined for the downtown as well as most residential areas. It further provides interconnection between State Route 36, State Route 99, and Interstate 5 for interregional transit.

Figure 2

INTERSTATE 5 INTERCHANGES



- The North Red Bluff Interchange is located to the north of the city center at the north end of Main Street. This interchange provides only southbound exit off the freeway and only northbound entrance onto the freeway, each from Main Street. The interchange is significant for commercial and industrial traffic destined for sites in the northern sectors, as well as connecting Highway 36W to Interstate 5.
- The Wilcox Golf Road Interchange is located at the northern edge of the Red Bluff City Limits several miles north of the city center at the intersection of Wilcox Road and Wilcox Golf Road. This interchange features full access to the freeway in both north and southbound directions. The interchange provides access to residential, commercial, and recreational sites in the far northern portions of Red Bluff.

Interstate 5 bisects Red Bluff to the east of the downtown area. The main east-west access over the freeway and river is via the four lane overcrossing and interchange at Antelope Boulevard (State Highway 36). In addition, the Adobe Road separation provides an overpass without entrance or exit onto the freeway.

SACRAMENTO RIVER

The Sacramento River also bisects the city, running in a roughly southwest direction north of the city and subsequently curving to a southeast direction. The river is located to the east of the downtown area. While the river is navigable, no commercial shipping exists in the area although there is extensive recreational use emanating from boat ramps at River Park and at the south end of Sale Lane.

STATE HIGHWAYS

State Highway 36 is the major thoroughfare serving the mountain communities of Susanville, Chester, and Mount Lassen to the east, and providing a route over the mountains to State Highway 101 to the west. Highway 36 enters the Red Bluff Sphere of Influence from the eastern edge of the Red Bluff City Limits. It runs west on the entirety of Antelope Boulevard and then turns north onto Main Street. At the northern edge of the city limits, the highway turns west on Beegum Road and exits the area. Along Antelope Boulevard and Main Street in the downtown area, State Highway 36 comprises the most heavily congested route in the city, as a result of regional through travel as well as local downtown traffic.

State Highway 99 links Red Bluff with the regional center of Chico to the south. Highway 99 enters the Red Bluff area from the southeast, connecting with Highway 36 at the eastern edge of the Red Bluff City Limits. Highway 99 runs west along Antelope Boulevard, and terminates at its intersection with Interstate 5.

All of the traffic from State Highways 36 and 99 connect with central Red Bluff via the Antelope Boulevard overcrossing of the Sacramento River and Interstate 5.

LOCAL ROADWAYS AND INTERSECTIONS

Significant local roadways in the Red Bluff area include South Jackson Street, Luther Road, South Main Street, Monroe Street, and Walnut Street. These roadways provide the major intercity routes for access to work, shopping, and home trips.

Major intersections in the Red Bluff area are generally controlled by traffic signals; these also represent the most crowded areas. The most

RAIL TRANSPORTATION

The Southern Pacific Railroad tracks split the city, running along State Highway 36 north of the city, along Madison Street in the area west of the downtown area, intersecting with South Main Street in an overpass just north of Luther Road, and exiting the area to the south along Old Highway 99. Rail traffic is chiefly long distance freight; an average of twelve such trains traverse the city daily, generally between the hours of 4:00 p.m. and 8:00 a.m. At a maximum speed of 45 miles per hour through the city, Southern Pacific Railroad officials estimate that the average traffic delay caused by a freight train to be two minutes. Two Amtrak passenger trains run through the city daily, one in each direction, between 2:00 a.m. and 4:00 a.m. There is no passenger stop at Red Bluff. The nearest boarding facilities are at Redding or Chico.⁴ There are currently no provisions regarding rail transported toxic or hazardous waste through the Red Bluff area.⁵

TRUCK TRANSPORTATION

Red Bluff streets host a relatively high number of heavy trucks, especially in the downtown area, due to regional through traffic on State Highways 36 and 99 and local destinations. No formal truck route exists at present, although there is an informal route designation from Interstate 5 at Antelope Boulevard, south on Main Street past Luther Road down to the South Red Bluff Interchange at Interstate 5, and west along Luther Road to the airport industrial area. There are currently no provisions regarding truck transported toxic or hazardous waste through the Red Bluff area.⁶

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WATER TRANSPORTATION

While the Sacramento River is technically navigable, no commercial shipping or ferries are currently operating in the area. There is, however, extensive recreational use emanating from boat ramps at River Park and at the south end of Sale Lane. There are various creeks and sloughs that flow into the Sacramento River, Reeds Creek being the largest of these, but none of which are navigable.⁷

PUBLIC TRANSPORTATION

Regional public transportation is available in Red Bluff. Intracity bus transportation is provided by Greyhound Bus Lines, which dispatches an average of seven express and local buses in both the northbound and southbound direction daily.⁸ Cascade Trailways, which operates through the Greyhound Bus facilities, also has one bus daily in each direction, northbound and southbound. Mount Lassen Motor Transit connects Red Bluff with the mountain communities of Mineral, Chester, and Susanville on one daily run six days per week.⁹ There is currently no commercial passenger service from Red Bluff Airport; the nearest commercial flights are available at Chico or Redding Airports.^{10 11} While two Amtrak passenger trains run daily through Red Bluff, citizens must embark at Amtrak's nearest boarding stops at Chico and Redding.¹²

Intracity transportation is available for all populations. The Red Bluff Taxi Service is a 24-hour service with two vehicles; ridership averages 80 riders per day with a maximum demand of 120 persons.¹³ Special populations within Red Bluff City Limits have been served by the VanTrans system since 1982. Operated by a private, non-profit agency, it provides local dial-a-ride van services to the elderly and disabled members of the community through a

contract with Mount Lassen Motor Transit. The VanTrans system is financed through state and local funding, and patrons pay \$1.50 per ride. The system operates Monday through Friday from 8:00 a.m. to 6:00 p.m. In response to concerns regarding limited service hours, VanTrans has supplemented their services by contracting with the local taxi service to provide subsidized taxi rides to the elderly and disabled during the hours VanTrans does not run, specifically 6:00 a.m. to 8:00 a.m., 6:00 p.m. to 11:00 p.m., and on weekends. Patrons pay \$2.00 per ride for the taxi, and VanTrans picks up the other \$3.00 of the \$5.00 negotiated flat rate fee.¹⁴

The Volunteer Emergency Transportation Service (VETS) serves the needs of the elderly and disabled in Red Bluff and in rural areas of Tehama County. Eligible persons needing transportation to medical or other appointments call ahead to the VanTrans office; their needs are coordinated with the schedules of volunteers who provide transportation by private automobile. The volunteers are reimbursed \$.25 per mile for the use of their car through separate state and local funding.¹⁵

BICYCLE TRANSPORTATION

Bicycling is the common means of transportation for many who cannot afford an automobile or a recreational alternative for those who enjoy the health and environmental benefits of bicycling. A large percentage of those who depend on bicycles are children riding to and from school.

Bicycle route designations, denoting type and quality, are enumerated in Table 2.

TABLE 2

BICYCLE PATHWAY DESIGNATIONS

CLASS I bicycle pathways are fully separated from any traffic lanes, either in a setback landscaped corridor adjacent to the road, or in a totally separated corridor apart from the street.

CLASS II bicycle pathways are within the right-of-way of streets, usually collectors and arterials. The lanes are up to seven feet wide, located adjacent to the travel lanes with signage and a stripe on the pavement demarking the lane.

CLASS III bicycle pathways are shared usage of streets with no specific separation of different modes of traffic. Street signage is often used to designate a roadway as a bicycle route.

Source: Time Saver Standards for Site Planning, p. 626-628.

A bicycle route was designated through the Red Bluff Sphere of Influence in the 1974 Red Bluff Park System General Plan, utilizing both Class I and Class III bicycle paths; there are no Class II bicycle paths in the area. None of the Class I bicycle routes are developed as yet and much of the routes within this designation are in rough terrain, such as creekbeds and obscure trails. This bicycle route is roughly circular, extending along the area creeks and rivers, and connecting several major destinations such as schools, parks, and the downtown area¹⁶ (see Figure 4).

The 1990 Regional Transportation Plan for Tehama County shows a more current bikeways system comprised solely of unsigned Class III bicycle routes (Figure 5). Although overlapping the 1974 plan routes slightly, the 1990 version includes many more areas of the city. Routes include all major and minor arterials and collector streets of the city. In addition, portions of local streets Douglass Street, Cedar Street, Franklin Street, First Street, Washington Street, Orange Street, Sacramento Avenue, Madison Street, Sycamore Street, Riverside Way, Ash Street, Kaer Avenue, Paynes Creek Road, Mulberry Avenue, and Berrendos Avenue are included.¹⁷

While the large bicycle route system in the Red Bluff area extends to most shopping, work, and school applications, significant care is required to use the Class III bicycle lanes in many areas of the city. There are no bicycle route signs erected to alert drivers to the presence of bicyclists. Moreover, bicycle route users must struggle with a number of obstacles and hazards, such as parked cars, heavy trucks, and narrow lanes of congested traffic, especially on major arterial streets such as Main Street and Antelope Boulevard.

Figure 4

BIKEWAY PATHS RED BLUFF PARK SYSTEM GENERAL PLAN - 1974



Figure 5

BIKEWAY PATHS 1990 REGIONAL TRANSPORTATION PLAN



AIR TRANSPORTATION

Red Bluff Municipal Airport is located southwest of the city center south of Luther Road between South Jackson Street and Paskenta Road. As an FAA Flight Service Station¹⁸ with a 6,000 foot runway, the airport is capable of handling all small aircraft up to and including jets. There is no scheduled commercial air service at the airport. It is the intent for the airport to accommodate local and private business traffic and there are no plans for further expansion to attract commercial airline traffic.¹⁹

LEVEL OF SERVICE (LOS)

The Level of Service, or LOS, indicates the relative congestion and quality of operating conditions of an intersection based on the ratio of traffic volume to capacity. LOS ratings range from best to worst; specifically, from LOS A, which is a volume to capacity ratio of less than 60%, to the LOS F, which indicates a volume to capacity ratio of 100% or more. Table 3 gives a full explanation of each LOS and volume to capacity ratio.

TABLE 3

LEVEL OF SERVICE DEFINITIONS

Level of Service "A" represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high. Intersection delays are very short, less than 5 seconds. The general level of comfort and convenience provided to the motorist, passenger, or pedestrian is excellent.

Level of Service "B" is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS A. Intersection delays are somewhat increased, to between 5 and 15 seconds. The level of comfort and convenience provided is somewhat less than at LOS A because the presence of others in the traffic stream begins to affect individual behavior.

Level of Service "C" is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream. The selection of speed is now affected by the presence of others, and maneuvering within the traffic stream requires substantial vigilance on the part of the user. Intersection delays are in the range of 15 to 25 seconds. The general level of comfort and convenience declines noticeably at this level.

Level of Service "D" represents high-density but stable flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience. Intersection delays are between 25 and 40 seconds. Small increases in traffic flow will generally cause operational problems at this level.

Level of Service "E" represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Freedom to maneuver within the traffic stream is extremely difficult, and it is generally accomplished by forcing a vehicle or pedestrian to "give way" to accommodate such maneuvers. Intersection delays range between 40 and 60 seconds. Comfort and convenience levels are extremely poor, and driver or pedestrian frustration is generally high. Operations at this level are usually unstable, because small increases in flow or minor perturbations within the traffic stream will cause breakdowns.

Level of Service "F" is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations. Operations within the queue are characterized by stop-and-go waves, and they are extremely unstable. Vehicles may progress at reasonable speeds for several hundred feet or more, then be required to stop in a cyclic fashion. Intersection delays are greater

than 60 seconds. Level-of-service F is used to describe the operating conditions within the queue, as well as the point of the breakdown. It should be noted, however, that in many cases, operating conditions of vehicles or pedestrians discharged from the queue may be quite good. Nevertheless, it is the point at which arrival flow exceeds discharge flow which causes the queue to form, and level-of-service F is an appropriate designation for such points.

Source: Highway Capacity Manual (1985).

VOLUME TO CAPACITY RATIOS OF LEVELS OF SERVICE

<u>LOS</u>	<u>V/C RATIO</u>
A	0.00 - 0.60
B	0.61 - 0.70
C	0.71 - 0.80
D	0.81 - 0.90
E	0.91 - 1.00
F	>1.00

Source: Highway Capacity Manual (1985).

In addition to traffic volume, level of service may be affected by a variety of "friction" factors. These may include large amounts of on-street parking, driveways or access points to the roadway, truck volumes, pedestrian activity, lack of left-turn lanes, traffic signals, and low driver familiarity with the area. Presence of these factors may significantly reduce LOS below the actual vehicle volume to capacity ratio. This is the case in downtown Red Bluff, which has on-street parking, many access points, and a large volume of trucks. LOS of the key Red Bluff roadways and intersections is included in Table 5; notably, most of these roadways and intersections are operating at or above LOS C. Deficient roadways are listed in Table 4.

DAILY TRAFFIC VOLUMES

Existing traffic volumes were measured in June 1990 through February 1991 at 19 key roadways and intersections throughout the city. Using the peak hour method in accordance with the 1985 Highway Capacity Manual, counts were made between 7:00 a.m. Monday morning and 6:00 p.m. Thursday evening to obtain representative samples and to include commuter traffic from outlying areas such as Redding and Chico. The traffic volumes obtained are comparable to available CalTrans figures. The summary of the results are shown in Table 5 and illustrated in Figures 6 and 7.

TABLE 5

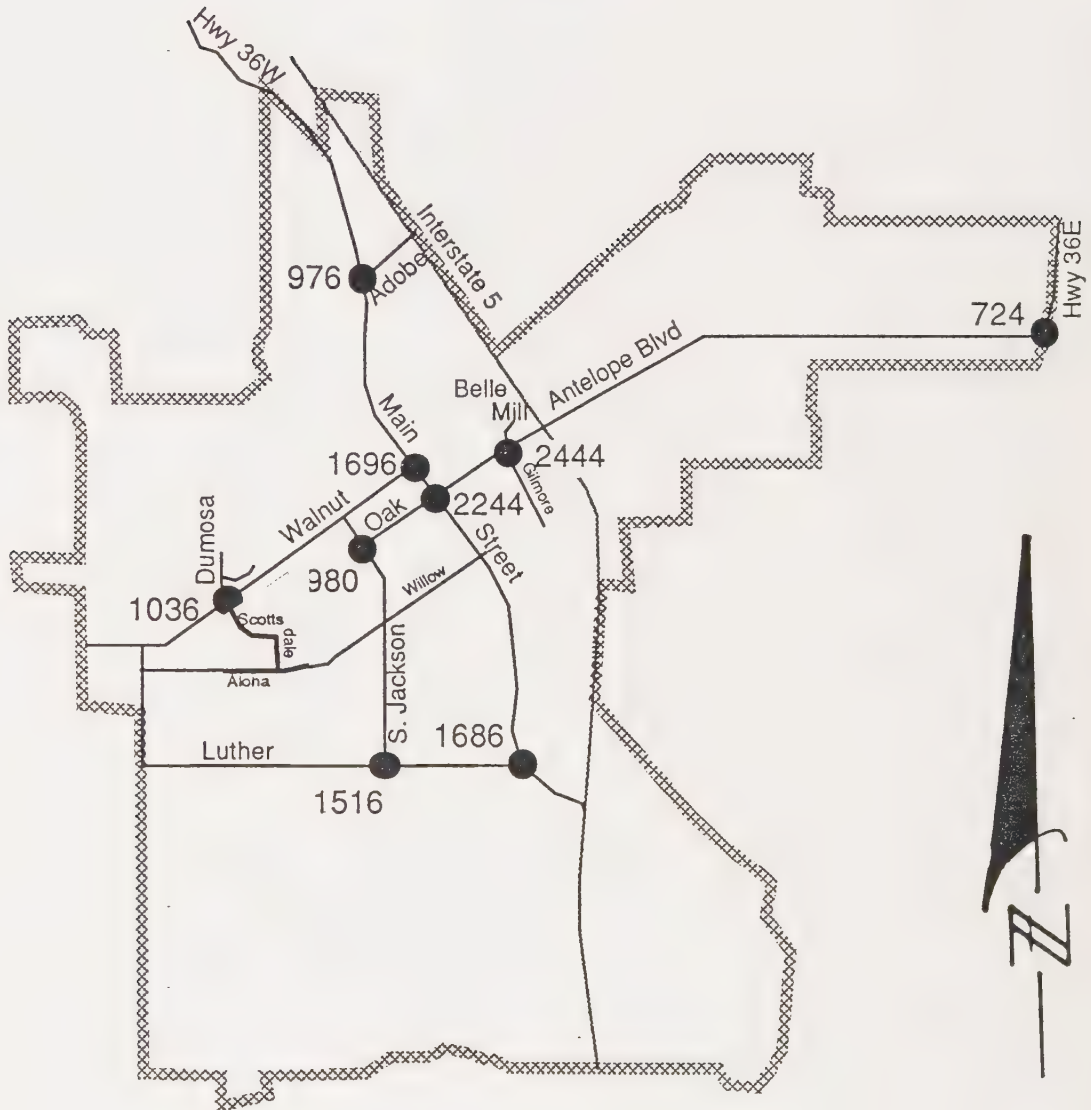
PEAK HOUR INTERSECTION AND ROADWAY VOLUMES
AND LEVELS OF SERVICE

<u>Intersection</u>	<u>Peak Hr Volume</u>	<u>LOS</u>
Antelope Blvd/Main Street	2244	F
Walnut Street/Main Street	1696	D
Antelope Blvd/Highway 36E	724	A
Walnut Street at Dumosa	1036	A
Main Street at Adobe Road	976	A
South Jackson Street at Luther Road	1516	C
Luther Road at Main Street	1686	B
Antelope Blvd at Belle Mill Road	2444	E
South Jackson Street at Oak Street	980	D

<u>Roadway</u>	<u>Peak Hr Volume</u>	<u>LOS</u>
Main Street between:		
Adobe Road/Walnut Street	896	A
Walnut Street/Oak Street	1088	F
Oak Street/Luther Road	1496	B
Antelope Boulevard between:		
Highway 36E/Sale Lane	620	B
Sale Lane/Belle Mill Road	1804	D
Belle Mill Road/Main Street	2052	E
Main Street/South Jackson Street	748	C
Luther Road between:		
Main Street/South Jackson Street	1145	B
Walnut Street between:		
Main Street/Dumosa Avenue	996	C
South Jackson Street between:		
Oak Street/Luther Road	779	C

Figure 6

PEAK HOUR INTERSECTION VOLUMES

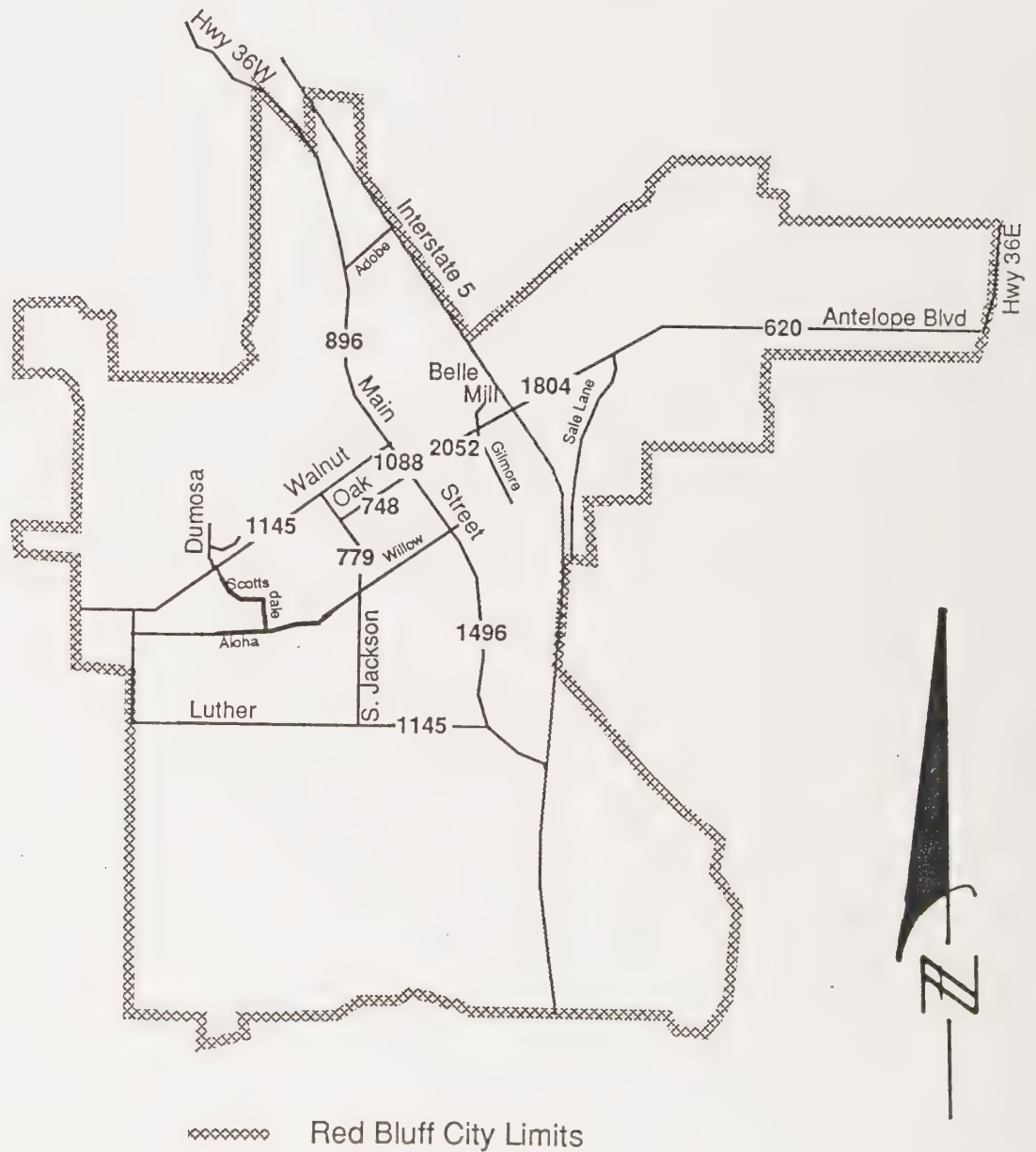


Red Bluff City Limits

Source: Personal observation
June 1990 through February 1991

Figure 7

PEAK HOUR ROADWAY VOLUMES



Source: Personal observation
June 1990 through February 1991

Higher traffic volume locations pinpoint some of the stress points in the circulation system. These include the intersections of Antelope Boulevard at Main Street, Antelope Boulevard at Belle Mill Road, and Walnut Street at Main Street, as well as roadways such as Antelope Boulevard and Main Street.

FUTURE CONDITIONS

In order to forecast future traffic volumes and Levels of Service, the QRS II traffic projection model was employed. Using the buildout of all land uses and roadway networks shown in the General Plan, along with scheduled improvements, the computer model calculates projected traffic volumes. The traffic volumes are distributed onto the roadway system by the complex modelling formulas set forth in the National Cooperative Highway Research Program Report No. 187, Quick-Response Urban Travel Estimation Techniques and Transferable Parameters, and projects the logical route choices of residents. The route choices are determined by several factors, such as speed, capacities, travel times, distances, and avoidance of congested areas. The output of the program is the average daily traffic (ADT's) and peak hour volumes of roadways and intersections at buildout. Using this data, intersections and roadways that may require improvement or alternative routes in order to maintain adequate ease of circulation are spotlighted. These figures are shown in Table 6.

TABLE 6
PROJECTED INTERSECTION AND
ROADWAY VOLUMES AT BUILDOUT

<u>Intersection</u>	<u>Peak Hour Volume</u>
Antelope Boulevard/Main Street	2318
Walnut Street/Main Street	1846
Antelope Boulevard/Highway 36E	958
Walnut Street/Dumosa	2012
Main Street/Adobe Road	1528
South Jackson Street/Luther Road	2246
Luther Road/Main Street	2198
Antelope Boulevard/Belle Mill Road	2472
South Jackson Street/Oak Street	1248
South Jackson Street/Aloha Street	1367

<u>Roadway</u>	<u>Peak Hour Volume</u>
Main Street between:	
Adobe Road/Walnut Street	1120
Walnut Street/Oak Street	1156
Oak Street/Luther Road	1869
Antelope Boulevard between:	
Highway 36E/Sale Lane	804
Sale Lane/Belle Mill Road	2036
Belle Mill Road/Main Street	2345
Main Street/South Jackson Street	874
Luther Road between:	
Main Street/South Jackson Street	1859
Walnut Street between:	
Main Street/Dumosa Avenue	1901
South Jackson Street between:	
Oak Street/Luther Road	1416
Aloha Street between:	
Paskenta Road/South Jackson Street	723
Monroe Street between:	
Walnut Street/Highway 36W	1184
Paskenta Road between:	
Walnut Street/Luther Road	985

The anticipated future traffic conditions in Red Bluff at buildout includes increasing traffic on minor arterials and collectors. South Jackson Street and Monroe Street will experience levels of service degradation generated by increased development in the north and south sectors of the city, as well as drivers attempting to avoid the gridlock of the downtown area. The construction of a bridge over Reeds Creek will facilitate increased traffic on Paskenta Road between Walnut Street and Luther Road. South Jackson Street from Walnut Street to Luther Road will also realize increased traffic as a result of the new east-west linkage of Willow Street to Aloha Street, which will create a major intersection that will require signalization. Additionally, Aloha Street will have expanded use as a link to developments in the west.

The overriding circulation concern for the Red Bluff area, both currently and in the future, is the downtown area of Antelope Boulevard from Sale Lane to Main Street, and Main Street from Antelope Boulevard to Walnut Street. Because Antelope Boulevard is the only east-west link from the outlying eastern area to the city core over the Sacramento River and Interstate 5, all east-west traffic must use this roadway. As a consequence, it is virtually required that the intersection of Antelope Boulevard and Main Street, Antelope Boulevard and Rio Street, Antelope Boulevard and Belle Mill Road, and Antelope Boulevard and Sale Lane be used to gain this cross-town access. With greater numbers of access roads, lower density, and higher speeds, traffic dissipates easily on Antelope Boulevard east of Sale Lane. On the west side of Antelope Boulevard, at Rio Street and Main Street, limited access and high density create gridlock. While these areas are currently at unacceptable levels of service, the problems that have created this gridlock

are not anticipated to change. The situation will, therefore, continue to degrade as development occurs.

The traffic problems of the main downtown intersections (Antelope Boulevard and Rio Street, Antelope Boulevard and Main Street, and Main Street and Walnut street) were studied by traffic engineering consultant Joseph Holland in 1986. The report, entitled "Traffic Analysis: Antelope Blvd. & Rio Street, Red Bluff, California" provides valid alternatives to reduce downtown congestion:

1. Remove some on-street parking and restripe portions of Main Street, Antelope Boulevard, and Walnut Street to increase the number of lanes, thereby increasing traffic capacity and LOS. The resulting decrease in parking in an area already perceived as having insufficient parking proved quite unpopular.
2. Signalize the intersection of Rio Street and Antelope Boulevard to shift some of the traffic from Main Street onto Rio Street. Further analysis of this alternative indicated there would be a notable improvement in traffic conditions at the Antelope Boulevard/Main Street intersection with a slight improvement at the Walnut Street/Main Street intersection. The negative impact, however, would include greater traffic volumes on Rio Street, longer delays in turning onto Antelope Boulevard from Main Street necessitated by the coordination of the two sets of traffic signals, potential peak hour blockage of the Rio Street intersection from backup of westbound traffic from the Antelope Boulevard/Main Street intersection, and significant cost of signal installation. The report goes on to state that while the traffic situation would improve in spots, the

overall delay for through traffic would actually increase as a result of the signalization of the Antelope Boulevard/Rio Street intersection.

3. Restrict left turns from Rio Street onto Antelope Boulevard during peak hours. This course of action would improve traffic volumes on Rio Street, eliminate the significant left-turn delay from Rio Street, and be of minimal cost. In terms of downtown congestion, the results would be minor: left-turn traffic would be diverted from Rio Street to Main Street, but overall delays would be virtually unchanged.²⁰ This alternative was the one chosen by CalTrans and the City of Red Bluff for implementation, expanding the prohibition of left turns from peak hours to 24 hours per day.

Another possible solution to the downtown traffic congestion not suggested in Holland's report is the conversion of Main Street and Rio Street between Sycamore Street and Cedar Street to a one-way street couplet. Additional signalization would be needed at several sites, including Rio Street at Antelope Boulevard, Rio Street at Walnut Street, and Main Street at Sycamore, to facilitate this change. The chief advantage would be the significant reduction in intersection delays, thus increasing the capacity and LOS. On the other hand, signalization costs would be significant, and funding for such would be difficult to obtain. Further, the reeducation of the driving public may be slow, as residents accustomed to the current configuration may take a long time to readjust their driving habits and use the one-way streets correctly. The City has noted significant opposition to this alternative when suggested in the past, and there is no indication that public sentiment has significantly changed.

Recognizing that a new overpass of Interstate 5 and the Sacramento River would be prohibitive on both financial and environmental grounds, the addition of an interchange at the existing overpass of Interstate 5 at Adobe Road is being explored. The object would be to provide eastbound access via the freeway thereby bypassing Main Street and alleviating downtown congestion created by through traffic on Highway 36. Future plans include possible extension of Adobe Road to connect, via freeway, with Antelope Boulevard. The project may include the addition of a frontage road along the west side of Interstate 5 and ramp interchanges providing southbound entrance to and northbound exit from the freeway, or may include the realignment of Adobe Road to Walton Avenue. This alternative appears popular amongst residents, as well as being of low cost to the City.

Discussions between the City and CalTrans are currently ongoing, and initial projections calculate the ramp construction to begin no sooner than 1997, and most likely will commence after the year 2000.

The final alternative is to do nothing about the downtown congestion. Current LOS is at unacceptable levels. Future development will only exacerbate the situation, as there are no convenient alternative routes in crossing to the east side of the City. Doing nothing may be quite costly in terms of driver frustration, delays, and increasing complaints to the City.²¹

Another perceived problem in downtown circulation is availability of parking. With many destinations, such as banks, shops, and restaurants along Main Street, Oak Street, and Walnut Street, competition for on-street parking on these streets is most intense. There is, however, an abundance of parking generally available within one or two blocks of these destinations, on Washington, Jefferson, and Rio Streets. While distribution of parking may

not be of optimal convenience for users in terms of proximity to destinations,
in sum, parking availability in the downtown area is sufficient.

GOALS, OBJECTIVES, POLICIES, AND PROGRAMS

I. GOAL

Problem-free circulation throughout Red Bluff.

A. OBJECTIVE: Provide convenient access to all areas of the city.

1. POLICY: Level of Service (LOS) should not deteriorate below a Level "C" on city streets during peak traffic hours.
 - a. Program: Monitoring of LOS at key intersections shall assist to determine when and if traffic levels approach degradation of LOS.
2. POLICY: Development and roadway improvements should be phased such that LOS does not deteriorate significantly.
 - a. Program: Approval of development proposals that may result in a degradation of LOS may be postponed until roadway improvements are made.
3. POLICY: Traffic improvement priority shall be given to improve city streets LOS to Level "C" or better, where feasible.
4. POLICY: Use of existing transportation facilities and mediums shall be maximized.
5. POLICY: Strip commercial and "drive-in" land uses shall be discouraged, except where specifically designated, due to the friction of the traffic generated.
 - a. Program: Site-specific traffic impact studies may be required of any vehicle-intensive use.
6. POLICY: Turning lanes shall be incorporated wherever appropriate to direct and channel traffic.
 - a. Program: The City should identify arterial and collector streets that require median strips and consider for their funding in Capital Improvement Fund.
7. POLICY: New developments shall be required to pay a fair share percentage of necessary traffic improvements.

- a. **Program:** The City should develop a system to determine appropriate traffic impact fees for residential and commercial development.
- B. **OBJECTIVE:** Improve east-west accessibility over the north-south roadway barriers, such as the Sacramento River, Interstate 5, and the Southern Pacific railroad tracks.
 - 1. **POLICY:** Continue to seek other ways to improve existing east-west routes.
 - 2. **POLICY:** Continue to develop additional avenues of crossing.
 - a. **Program:** Preserve rights-of-way needed for potential east-west accessibility.
 - b. **Program:** Encourage and cooperate with state and federal transportation officials for additional interchange at Interstate 5 and Adobe Road.
 - c. **Program:** Identify, evaluate, and prioritize potential east-west routes and develop plans for improvement.
 - d. **Program:** Investigate alternative financing mechanisms for east-west circulation improvements, such as assessment districts.
- C. **OBJECTIVE:** Reduce traffic congestion in the downtown area.
 - 1. **POLICY:** Develop alternate through-routes in downtown area.
 - a. **Program:** Encourage and cooperate with state and federal transportation officials for additional interchange at Interstate 5 and Adobe Road to alleviate traffic congestion in the downtown area.
 - b. **Program:** Continue development of transportation model initiated herein using the QRS II modelling program, updating information to evaluate downtown traffic and parking alternatives.
 - 2. **POLICY:** Non-local and commercial through truck traffic shall be discouraged from utilizing residential and downtown areas.

- a. **Program:** The City should plan, develop, and adopt a truck route which discourages truck traffic from the downtown as well as residential areas.
- b. **Program:** The City should coordinate with involved agencies to develop alternative truck routes.

D. **OBJECTIVE:** Adequate parking for commercial and residential applications.

- 1. **POLICY:** Enforce and enhance City planning ordinances pertaining to the provision of adequate parking for commercial and residential developments.
- 2. **POLICY:** The City shall coordinate involved agencies to manage traffic and parking in the downtown area.
 - a. **Program:** Alternative off-street parking possibilities for large semi-trucks should be investigated by the City.
 - b. **Program:** Develop ordinances to restrict parking large semi-trucks on city streets.

II. GOAL

Quiet vehicular transit in residential areas.

A. **OBJECTIVE:** Minimize traffic/transit impacts on residential areas.

- 1. **POLICY:** New single-family residences shall not front directly onto State Route 36 or major or minor arterial streets.
 - a. **Program:** Any new single-family residence on an arterial may be required to provide a buffer strip for separation of property from the roadway.

B. **OBJECTIVE:** Designate truck routes that minimize residential impacts.

- 1. **POLICY:** Restrict truck traffic to deliveries on all city streets other than those specifically designated as a truck route.
 - a. **Program:** The City should plan, develop, and adopt a truck route which discourages truck traffic from the downtown as well as residential areas.

III. GOAL

High degree of safety in all transportation modes.

- A. OBJECTIVE: Insure public safety from transported toxic substances.
 - 1. POLICY: Transit of toxic substances shall be restricted from residential areas in compliance with existing law.
 - a. Program: The City should cooperate with CalTrans and state emergency response officials to enforce toxic waste spill response plans.
- B. OBJECTIVE: Adequate emergency vehicle through access to all new developments.
 - 1. POLICY: Fire lanes in residential and commercial building complexes shall be designed to adequately accommodate emergency vehicles.
 - a. Program: Each subdivision or development must have at least two points of access to collector streets to ensure adequate access, unless approved by the City's Technical Advisory Committee.
 - 2. POLICY: Cul-de-sacs shall be designed to accommodate emergency vehicle parking and turnaround.
 - a. Program: Cul-de-sacs greater than 300 feet deep should be discouraged.
 - 3. POLICY: Through streets shall be encouraged.
 - a. Program: Utilize continuous, rather than segmented, street design on arterials and collectors.
 - b. Program: Modify local streets design to discourage interneighborhood traffic on local streets.
- C. OBJECTIVE: Promote the safety of pedestrians and cyclists on streets and roadways.
 - 1. POLICY: Separation of bicycle and pedestrian traffic from vehicular traffic shall be encouraged.
 - a. Program: Consider separate bicycle and pedestrian lanes in each direction on any new arterial or collector street.

2. **POLICY:** Bicycle lanes shall be considered in construction or upgrade of roads, overpasses, and bridges.
 - a. **Program:** Require new development and redevelopment to include bicycle routes.
 - b. **Program:** The City may assess and collect impact fees for maintenance and construction of bicycle lanes on new development and redevelopment.
 3. **POLICY:** New bicycle lanes shall be connected with the existing bikeway system wherever feasible.
 - a. **Program:** The City shall update the existing bicycle route plan when appropriate.
 4. **POLICY:** Existing bicycle facilities should be maintained and upgraded, and new ones added as needed.
 - a. **Program:** The City shall consider standards for the provision of bicycle parking facilities for public and private development as part of a Transportation Systems Management (TSM) program.
- D. **OBJECTIVE:** Vehicular traffic safety shall be promoted.
1. **POLICY:** Allocate funds sufficient to maintain traffic safety programs.
 - a. **Program:** Monitor existing road conditions, noting and prioritizing needed improvements for inclusion in the Capital Improvement Fund.

IV. GOAL

Increase use of alternative transportation modes.

- A. **OBJECTIVE:** Encourage commercial and industrial land uses that allow alternative transportation access.
1. **POLICY:** Designate high intensity non-residential uses along arterials and/or within walking distance of residential concentrations.
 2. **POLICY:** Encourage employers to advocate employee use of fuel-efficient transportation.

- a. **Program:** Consider Transportation System Management (TSM) provisions to promote flex-time, vanpools, bicycling, and other alternative transportation methods to employment destinations.

B. **OBJECTIVE:** Reduce Average Daily Traffic (ADT) trips.

- 1. **POLICY:** Promote use of bicycling and walking as an alternative to automobile use.

- a. **Program:** Develop and adopt a TSM ordinance with provisions to promote bicycling and walking as methods of transportation.

- b. **Program:** Identify and consider development of new bicycle and pedestrian trails, especially in areas connecting residential areas to schools, shopping areas, and employment centers.

- 2. **POLICY:** The City shall make every effort to insure the provision of transportation for those who need it.

- a. **Program:** Support the continued operation of the VanTrans and Volunteer Emergency Transportation System (VETS) transportation systems.

- b. **Program:** Support expansion of the existing public transit system when population and demand are sufficient for such.

- 3. **POLICY:** Promote the use of car and van pooling.

- a. **Program:** Alter requirements for commercial and industrial developments permitting reduced parking areas for companies developing and participating in car and van pool programs.

- b. **Program:** Assist state officials to identify and develop potential locations of park-and-ride lots, especially near Interstate 5, Highway 36E, and Highway 99.

V. **GOAL**

Adopt land use policies that promote a sound and compatible circulation system.

- A. **OBJECTIVE:** Design and regulate city streets to minimize traffic impacts on adjacent land uses.

1. **POLICY:** Traffic impacts must be considered in land use decisions and vice versa.
 - a. **Program:** Land uses that have a high incidence of auto traffic, such as drive-ins, convenience stores, fast-food outlets, shopping centers, and large subdivisions, shall be required to submit a site-specific traffic impact report prior to construction or expansion of such facilities.
2. **POLICY:** Provide setbacks, landscaping, sound walls, and other barriers to protect adjacent land uses from noise, air pollution, and safety impacts from traffic and improve appearance where appropriate (see land development policies).
 - a. **Program:** Develop and adopt local noise standards for residential and commercial development.
 - b. **Program:** Landscaping of exposed unpaved graded surfaces in right-of-ways and frontages should be required.

ENDNOTES

1. City of Red Bluff. Ordinance 828, Article XXI: Parking and Loading Standards. (1984), 10-14.
2. D. Jackson Faustmann, "Parking Conditions Study, City of Red Bluff, October 1977". (Red Bluff, CA: City of Red Bluff Community Development Department, 1977.) 1-12.
3. City of Red Bluff, "Parking Study 1990". (Red Bluff, CA: City of Red Bluff Community Development Department, 1990). 1-4.
4. Mark Sullivan of Southern Pacific Railroad Administration Office in Dunsmuir CA, interview by author, 23 January 1990, by telephone.
5. City of Red Bluff Community Development Director, Chuck Hayden, interview by author, 5 February 1991, by telephone.
6. Chuck Hayden, 12 December 1990.
7. City of Red Bluff Public Works Director, Harlan Warwick, interview by author, 26 June 1990, Red Bluff, CA.
8. Representative Lisa Stevens of Greyhound Bus Lines of Red Bluff, interview by author, 8 February 1991, by telephone.
9. "Regional Transportation Plan for Tehama County" (Red Bluff, CA: Tehama County Transportation Commission, 1988), 9-10.
10. "Regional Transportation Plan for Tehama County", 1988, 14.
11. Shasta Skyhawk service identified in the "Regional Transportation Plan for Tehama County", 1988, 11, which provided transportation between the Sacramento and Redding Airports, ceased operating in 1990.
12. Mark Sullivan, 28 January 1991.
13. "Regional Transportation Plan for Tehama County", 1988, 11.
14. Coordinator Pauli Hilsee of VanTrans Services of Red Bluff, CA, interview by author, 12 November 1990, by telephone.
15. Ibid.
16. Nickolas von Rotz, Jr., "Red Bluff Park System General Plan, October 1974" (Red Bluff, CA: City of Red Bluff Community Development Department, 1974), 4-5.
17. "Regional Transportation Plan for Tehama County", 1990, M-5.
18. Representative Brian Little of Red Bluff Aero at the Red Bluff Airport, interview by author, 22 February 1991, by telephone.
19. "Regional Transportation Plan for Tehama County", 1988, 15.

20. Holland, Joseph, "Traffic Analysis: Antelope Blvd. & Rio Street, Red Bluff, California: April 1986", p. 6-22.
21. Holland, p.10.

APPENDIX A

TELEPHONE SURVEY QUESTIONS
RED BLUFF CIRCULATION STUDY

- 1) What do you feel is the most significant transportation problem in the Red Bluff area?
- 2) What policies should the City of Red Bluff adopt to address traffic and circulation for the future?
- 3) What improvements to City transportation should be made in the next five years?
- 4a) What form of transportation do you use?
- 4b) How many miles do you travel to school or work?
- 4c) How many miles do you travel to shop?
- 5) Which most closely identifies you: retiree, working person, student?
- 6) How many years have you been a Red Bluff resident?

TELEPHONE SURVEY RESULTS RED BLUFF CIRCULATION STUDY

*1) What do you feel is the most significant transportation problem in the Red Bluff area?

Downtown traffic/congestion	55%	(66)
Parking	18%	(22)
Lack of public transit	18%	(21)
No problems	13%	(15)
Congestion (other)	9%	(11)
Railroad crossings	8%	(9)
Lack of bicycle lanes	5%	(6)

*2) What policies should the City of Red Bluff adopt to address traffic and circulation for the future?

No response	28%	(34)
Improve downtown circulation	23%	(27)
Create/improve bike paths	20%	(24)
Improve public transit	15%	(19)
Pursue Adobe Road interchange	8%	(10)
Develop alternate truck route	7%	(8)
Develop new east-west crossing of I-5 and river	3%	(4)
Implement developer fees	>1%	(1)

*3) What improvements to City transportation should be made in the next five years?

Improve public transit	35%	(42)
None	30%	(37)
Additional east-west interchange (incl. Adobe Road)	15%	(18)
Miscellaneous roadwork	13%	(15)
Add bike lanes/paths	8%	(9)
Miscellaneous signal changes	6%	(7)
Create downtown bypass	6%	(7)
Create a truck route/bypass	3%	(3)
Add one-way streets downtown	>1%	(1)

*4) What form of transportation do you use? How many miles do you travel to school or work? How many miles do you travel to shop?

Automobile/truck	98%	(117)
Walk	12%	(14)
Bicycle	5%	(7)

Work/school distance overall average 8.36 mi (including trips to outlying regional centers)

Local average 3.68 mi

Median distance 4 mi (range from .5 to 40 miles).

Overall average including non-workers 4.39 mi

Overall median distance .5 mi (range from 0 to 40 miles).

Shopping distance overall average 7.69 mi (including trips to outlying regional centers)

Local average 4.44 mi

Median distance 4 mi (range from .5 to 45 miles).

5) Which most closely identifies you: retiree, working person, student?

Retiree	<u>48%</u>	(57)
Working person	<u>45%</u>	(54)
Student	<u>8%</u>	(9)

6) How long have you been a Red Bluff resident?

Average 21.84 yrs ; median 18 yrs (range from 1 month to 75 years).

* These questions may have total percentages of response greater than 100% due to some of surveyed population citing more than one problem/policy/improvement/mode of transportation.

Sample Size: 120 respondents

City Population Size: 12,434 (1990 census figures)

Sphere of Influence
Population Size: 13,000 (est. based on 1990 census)

TELEPHONE SURVEY RESULTS INTERPRETATION RED BLUFF CIRCULATION STUDY

SURVEY DESIGN

In order to obtain significant public input to the Circulation Element, a telephone survey was utilized. Along with Chuck Hayden, City of Red Bluff Planning Director, Donald Holtgrieve Ph.D., and William Collins Ph.D., professors of planning at CSU Chico, a list of questions was formulated, designed to elicit citizen responses regarding current problems, desirable policies, and future improvements, while obtaining demographic and transportation habit information about the respondents.

Respondents were taken from the Glenn-Tehama County telephone book. Using only listed telephone numbers with Red Bluff addresses, respondents were chosen randomly by using the fifth number from the top of the first column from odd numbered pages. The fifth number from the top of columns one and three and fifth number from the bottom of columns two and four were taken from even numbered pages. A total of 174 telephone numbers were called to obtain 120 responses.

RESULTS

It is apparent that the largest perceived problem in the Red Bluff area is congestion in the downtown area with that response being given by 55% of those surveyed. Typical responses cited the intersection of Main Street and Antelope Boulevard, Main Street, Antelope Boulevard, and the downtown area in general as being problematic; several respondents noted the noon hour as the time traffic is especially clogged. Parking, especially in the downtown area, was noted by 18% of respondents to be of concern. Many (23%) again cited an improvement of downtown congestion be a proper emphasis for City policies. Suggested improvements digressed from the downtown concern, with 6% mentioning the creating of a downtown bypass route, although 15% suggested an additional east-west overpass or interchange which would conceivably take some of the traffic around the downtown area. A few people (3%) suggested a truck bypass for the downtown area, and a lone respondent suggested creating a couplet of one-way streets for the downtown area.

Public transit was an often noted concern of survey respondents. 18% of those surveyed saw the lack of public transit as being a problem, while 15% felt that the City should adopt a policy of transit improvement, and 35% of respondents thought that expansion of public transit to be an important improvement for the next five years. Significantly, many respondents noted the need for public transportation for the elderly and handicapped but were unaware of the existing VanTrans system; the prevalent attitude seemed to be that public transit was a positive improvement but one that the respondent would probably not take advantage of personally.

The lack of bicycle paths in the area were of some concern with 5% mentioning this; conversely, the lack of such paths were a stronger concern in regards to future policies with 20% responding citing this; many respondents referred their concern to the safety of children bicycling to school. Another 8% of respondents suggested the City make improvements to the bicycle path system in the next five years.

Miscellaneous other problems noted were railroad crossings (8%) and general congestion (9%). A lone respondent suggested the City implement developer fees to pay for circulation improvements. Several people had specific pet peeves with the circulation system, with 13% mentioning roadways or intersections that needed improvements such as different signalization or repaving.

It is notable that many respondents (13%) felt there were no circulation problems in Red Bluff. 28% of respondents had no suggestions for policies for the City to pursue, and 30% thought that no improvements would be needed in the next five years. Some respondent comments suggested a concern over the costs of improvements translating into increased taxes. It is also possible that due to the nature of the survey being by telephone, respondents did not have a long period of time to consider their answers such as they would in a written survey, and may not have had an immediate response. On the other hand, the necessary immediacy of the responses suggests that only problems of significant concern to the respondent were routinely mentioned.

REFERENCES CITED

REFERENCES CITED

California Department of Transportation, "Route Concept Report: Interstate 5". Sacramento, CA: California Department of Transportation, November 1984.

California Department of Transportation, "Route Concept Report: Route 36". Sacramento, CA: California Department of Transportation, October 1984.

California Department of Transportation, "Draft Route Concept Report: Route 36". Sacramento, CA: California Department of Transportation, May 1989.

California Department of Transportation, "Route Concept Report: Route 99". Sacramento, CA: California Department of Transportation, October 1984.

California Department of Transportation, "Draft Route Concept Report: Route 99". Sacramento, CA: California Department of Transportation, December 1989.

Campbell, James M. 1974. "Tehama County and Cities of Corning, Red Bluff, Tehama Unit of the Tri-County Area Planning Council General Plan Elements: Land Use, Open Space, Conservation." Red Bluff, CA: City of Red Bluff Community Development Department.

_____. 1974. "Tehama County and Cities of Corning, Red Bluff, Tehama Unit of the Tri-County Area Planning Council General Plan Elements: Safety, Seismic Safety, Noise, Scenic Highways." Red Bluff, CA: City of Red Bluff Community Development Department.

"City of Petaluma General Plan: 1987-2005". Petaluma, CA: City of Petaluma Planning Department.

Corford, Bert, System Planning Coordinator, Engineering Studies and System Planning Branch, District 2, California Department of Transportation, Redding, CA, to Celia McAdam, Chico, CA, 17 September 1990.

DeChiara, Joseph and Lee E. Koppelman., Time Saver Standards for Site Planning. New York: McGraw-Hill, 1984.

Faustmann, D. Jackson, "Parking Conditions Study, City of Red Bluff, October 1977". Red Bluff, CA: City of Red Bluff Community Development Department.

Highway Capacity Software. Transportation Research Board, Washington, D.C.

Holland, Joseph, "Traffic Analysis: Antelope Blvd. & Rio Street, Red Bluff, California, April 1986". Red Bluff, CA: City of Red Bluff Community Development Department.

Horowitz, Alan, Quick Response System II Reference Manual, Version 3.0, Center for Urban Transportation Studies, University of Wisconsin, Milwaukee. Milwaukee, WI: AJH Associates, October 15, 1990.

Office of Planning and Research. State of California General Plan Guidelines, Sacramento, CA: OPR, June 1987.

Office of Planning and Research, State of California Planning, Zoning, and Development Laws. Sacramento, CA: Office of Planning and Research, January 1988.

"The Pleasanton Plan: A Guide to Community Resources, Future Trends, and Long Range Plans". June 1986. Pleasanton, CA: City of Pleasanton Planning Department.

"Red Bluff General Plan Circulation Element." 1984. Red Bluff, CA: City of Red Bluff Community Development Department.

"Regional Transportation Plan for Tehama County". 1988. Red Bluff, CA: Tehama County Transportation Commission.

"Regional Transportation Plan for Tehama County". 1990. Red Bluff, CA: Tehama County Transportation Commission.

Transportation Research Board. Highway Capacity Manual, Special Report 209. Washington, D.C.: National Research Council, 1985.

Transportation Research Board. Quick Response Urban Travel Estimation Techniques and Transferable Parameters: A User's Guide, National Cooperative Highway Research Program Report 187. Washington, D.C.: National Research Council, 1978.

Von Rotz, Jr., Nickolas. 1974. "Red Bluff Park System General Plan, October 1974." Red Bluff, CA: City of Red Bluff Community Development Department.

WPM, Inc. "Expanded Initial Study for the Red Bluff Shopping Center, Red Bluff, CA, February 21, 1990". Red Bluff, CA: City of Red Bluff Community Development Department.

RESOLUTION NO. 25-1993 (GPA-20)

7

GENERAL PLAN AMENDMENT NO. 20
ADOPT 1992 HOUSING AND APPROVE RELATED NEGATIVE DECLARATION

WHEREAS, Government Code beginning with Section 65300, specifies that Cities shall adopt and periodically update their General Plans; and

WHEREAS, the City of Red Bluff Planning Commission has conducted surveys and studies in connection with the updated Housing Element of the General Plan of the City; and

WHEREAS, the Planning Commission did, after conducting public meetings and public hearings, recommend to the City Council the adoption of the updated Housing Element, and approval of the related Mitigated Negative Declaration; and

WHEREAS, the City Council did hold a public hearing on the updated General Plan Element and the related Negative Declaration;

NOW, THEREFORE BE IT RESOLVED that the City Council does hereby find that:

The Negative Declaration conforms to CEQA and its Guidelines.

None of the conditions listed in (a) - (d) of Section 15065 of the State CEQA Guidelines exist with regards to the updated Housing Element.

The updated General Plan Element conforms to the provision of the Planning, Zoning and Development Law in the California Government Code Title 7 Division 1 beginning with Section 65000;

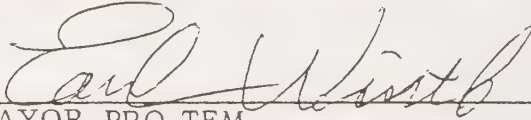
BE IT FURTHER RESOLVED that the City Council does hereby adopt the 1992 Housing Element and does approve the related Mitigated Negative Declaration.

PASSED, APPROVED AND ADOPTED at a regular adjourned meeting of the City Council of the City of Red Bluff on August 17, 1993, by the following vote:


AYES: Councilmembers: Schoelen, Sale, and Wintle.

NOES: None.

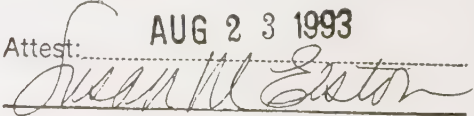
ABSENT OR NOT VOTING: Councilmembers: Penne (absent) and Trujillo (absent).


MAYOR PRO TEM

ATTEST:


CITY CLERK

This is to certify that the annexed document is a true and correct copy of the original on file in my office.

Attest: 
AUG 23 1993
SUSAN M. ELSTON, City Clerk
City of Red Bluff
County of Tehama, State of California

City of Red Bluff

General Plan

Housing Element



**City of Red Bluff
Community Development Department**

CITY STAFF

Dennis Fischer, City Manager
Harold Lucas, City Attorney
Susan Elston, City Clerk

Charles E. Hayden, Community Development Director
Jim Harris, Community Development Officer

CONSULTANTS

CENTER FOR (PLANNING AND)
GEOGRAPHICAL ANALYSIS
California State University, Chico

Donald Holtgrieve, Ph.D., AICP

David Burkland

Thomas Last

DRAFT HOUSING ELEMENT OF THE CITY OF RED BLUFF GENERAL PLAN

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I. INTRODUCTION AND PURPOSE

PURPOSE

A Housing Element is one of the seven elements of the general plan every California city and county is required by state law to prepare. According to State law, the purpose of the Housing Element is to provide for "the housing needs of all economic segments of the community" (Office of Planning and Research, 1990, 93).

The City of Red Bluff Housing Element meets the standards set forth in State law and provides an expression of the local commitment to utilize public and private resources of the community to provide decent and affordable housing for all City residents.

The California Department of Housing and Community Development (HCD) sets forth guidelines for the content of housing elements. The State requires that Housing Elements include "an identification and analysis of existing and projected housing needs and a statement of goals, policies, qualified objectives, and scheduled programs for the preservation, improvement and development of housing" (Office of Planning and Research, 1990, 94). To maintain up-to-date and relevant goals and policies, State law requires all housing elements be updated not less than every five years. The City of Red Bluff's previous Housing Element was adopted in 1986 and an interim revised Housing Element was adopted in September, 1990.

Besides complying with State law, local governments can derive many benefits from an accurate housing element including:

- Providing citizens with information about housing conditions in their community.
- Identifying potential needs and opportunities the City should examine more fully.
- Providing citizens with an opportunity to participate in the planning and housing policy process.
- Serving as a policy statement so that everyone will understand the basis of future decisions.

In addition to benefiting the citizens of Red Bluff, the Housing Element can also help public agencies coordinate housing programs and help builders make market decisions about the types and quantities of housing the City needs.

CITIZEN AND LOCAL PARTICIPATION

To ensure that all economic segments of the community were involved in the Housing Element update, all local nonprofit housing groups and other social service organizations serving the City's special needs groups were sent a copy of the draft Housing Element and provided four weeks to provide written comments. Public hearings were subsequently advertised in the local newspaper and community bulletin boards, and letters of invitation were circulated to community groups serving all segments of the City's population, the Board of Realtors, as well as Planning Commissioners and City Council members.

II. DEMOGRAPHIC AND EMPLOYMENT CHARACTERISTICS

THE REGION

The City of Red Bluff is located at the intersection of Highway 99, Interstate 5, and Highway 36 in the northern Sacramento Valley. The region has traditionally relied on the agriculture, manufacturing and timber resource sectors; but since the early 1980s, the natural resource industries have declined. However, retail trade and service sectors continue to expand, allowing for a more diversified and stronger regional economy. Between 1970 and 1980 annual growth in the Tri-County area of Butte, Glenn and Tehama Counties was 3.7% compared to the State average of 1.8%. After 1980 the same tri-county area grew only 2.5% annually as compared to the State's 2.45%.

TEHAMA COUNTY

Tehama County is divided north to south by the Sacramento River. The water of the Sacramento River supports a great range of agricultural activities.

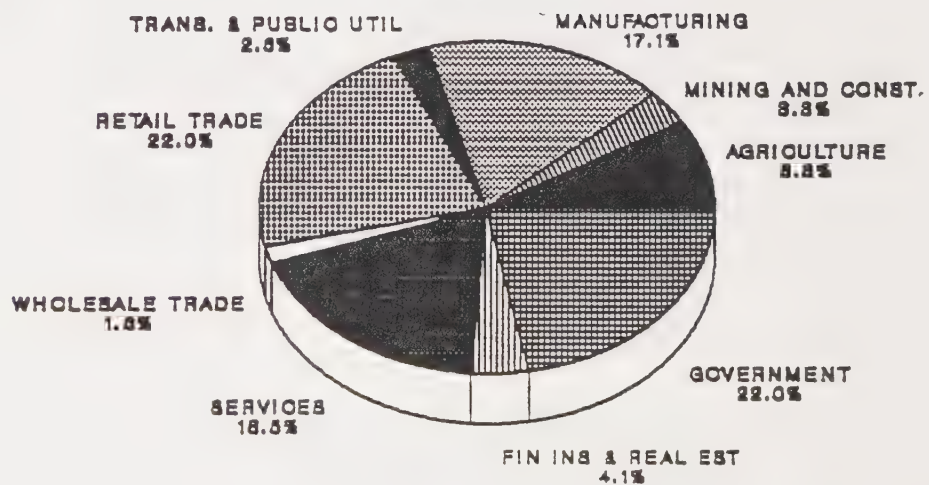
Red Bluff, the county seat, located on Interstate 5, serves as a county-wide trade area. A network of feeder roads link with Interstate 5, providing the County's manufacturing, agricultural and transportation industries with easy access to vital west coast markets. Red Bluff lacks east/west links to economically strong markets.

As indicated in Table 1, in 1990 Tehama County had a population of 49,625, 25% of whom live in the City of Red Bluff (U.S. Bureau of the Census, 1990). Approximately 38% of the County's population live in cities and 62% live in unincorporated areas.

Between 1980 and 1990 Tehama County grew over 27% which was down from the 31% growth in the previous 10 year period (1970-1980). County-wide population is expected to increase to 56,100 by 1995 and 67,000 by 2005 (California Department of Finance, 1991). The County's growth is a result of people moving into the county, rather than from a natural increase (births exceeding deaths) of the resident population (Tri-County Economic Development Corporation, 1991, 4).

County-wide employment in 1990 was estimated to be 15,700 (California Employment Development, 1991, 8). The largest employment sectors are primarily government, retail trade, services, and manufacturing (see Figure 1). Combined they account for nearly 80% of the county's wage earners. Employment levels fluctuate during the year, reflecting the agricultural harvest season and summer tourist trade. Annual average employment figures mask the upswings and downswings in the size of the labor force. Overall, the unemployment rate for 1990 ranged between nine and fourteen percent. The average unemployment rate for 1990 was 10.7 percent which represents a 1.2% increase from

TEHAMA COUNTY JOBS BY INDUSTRY DIVISION ANNUAL AVERAGE 1990



SOURCE: Calif. State Employ. Dev. Dept.

Figure 1 Tehama County: Employment Sectors, 1990

1989. In 1990 total employment fell by 1,200 for an annual average of 15,700 job holders (California Employment Development Department, 1991, 8). The decrease in employment is due to continued cutbacks in the lumber and wood industries. The Tehama County Welfare Department reported a caseload of 1,815 Aid for Families with Dependent Children (AFDC) recipients in January 1992. this represented 5,177 persons or over 10 percent of the County's total population. The Tehama County Welfare Department reported 60 cases, serving 65 persons, receiving General Assistance Grants.

Table 1
Tehama County
Population of the County and Selected Cities
1970, 1980, and 1990

Political Subdivisions	1970 (a)	1980 (b)	1990 (c)	Percent Change	
				1970 to 1980	1980 to 1990
Total	29,517	38,888	49,625	31.7%	27.6%
Corning	3,573	4,745	5,870	32.8%	23.7%
Red Bluff	7,676	9,490	12,363	23.6%	30.2%
Tehama	317	365	401	15.1%	9.8%
Balance of County	17,951	24,288	30,991	35.3%	27.6%

(a) Census of Population, April 1, 1970.

(b) Census of Population, April 1, 1980.

(c) Census of Population, April 1, 1990.

The ratio of the number of people who live in an area relative to the number of people who work there is often referred to as the "jobs/housing" balance (California Department of Housing and Community Development, 1987). Tehama County (and Red Bluff, as discussed below) are close to being in balance with 12,250 jobs and 15,700 employed residents, or about 1.3 resident workers for every job (California Employment Development Department). According to the Employment Development Department (1991), the County's wage and salary employment will increase by 250 for 1992. Most of these jobs will be in the retail trade and service sectors.

POPULATION CHARACTERISTICS OF THE CITY OF RED BLUFF

The City of Red Bluff is by far the largest city in the County, currently housing 25 percent of the County's population. Between 1980 and 1990, the population of the City is estimated to have increased from 9,490 to 12,363, a growth rate of 30 percent compared to a County-wide growth rate of less than 27.6 percent (U.S. Bureau of the Census, 1980, 1990). (See Table 1.)

The Department of Finance projects the County's population will grow from 50,100 in 1990 to 61,700 in 2000 (California Department of Finance, 1991). This represents a growth rate of 23%. The City of Red Bluff with 24.9% of the County's population in 1990 represented 26.8% of the County's growth for the 1980-1990 period. Population growth will continue to occur at a higher rate in the incorporated areas of the County due to the availability of services and housing. The County population will grow by 16.1% between 1990 and 1997 to 58,166 and the population of the City of Red Bluff will grow by 17.4% to 14,514.

Red Bluff is expected to add 903 new households between 1990 and 1997. A household is defined as a group of individuals or a family who live together in a single residential unit. The projected growth in households is a close approximation of the expected growth in the number of dwelling units in a community. The projected 17.8 percent increase in households is slightly more than the projected population growth for the City. The more rapid rate of household growth compared to population growth reflects a general demographic trend toward decreasing household sizes and increased rates of household formation. The average household size in Red Bluff is 2.47 persons compared to 2.65 in the County (U.S. Bureau of the Census, 1990). According to Urban Decision Systems estimates, between 1990 and 1995, household sizes in Red Bluff are projected to decrease to 2.45 (Tehama Local Development Corporation, 1991).

EMPLOYMENT TRENDS

A list of the major employers in the Red Bluff area is presented in Table 2. Two of the largest employers in the area are the County of Tehama and the Louisiana Pacific Corporation of California. The school district and St. Elizabeth Hospital are also major employers. Large manufacturing employers include Packing Company of California and Sierra Pacific.

Agriculture and the timber industry, once a large supplier of jobs in the Red Bluff area has struggled to remain viable. Manufacturing has declined in the area due to the lack of raw materials as was evidenced by the closing of the Roseburg Lumber Mill in Red Bluff in 1990. The trend for the future will be for a decline in jobs in manufacturing and agriculture, and an increase in jobs in service, retail, trade and government sectors of the economy. (See Table 2.)

Table 2
Major Employers in
RED BLUFF COMMUNITY AREA

Name of Company	Employment	Type of Business
MANUFACTURING		
Louisiana-Pacific Corporation	25	Lumber/Raw Moulding
Roseburg	0**	Lumber/Plywood/Pulp Products
Packing Co. of California	340	Paper Products
Sierra Pacific	295	Door Molds & Frames
Bell Carter Foods	210	Food Processing
Crain Mills	0**	Lumber Products
Fibreboard Corporation	350	Millwork
Sunsweet Dryers	115	Dried Fruit
NON-MANUFACTURING		
County of Tehama	500	County Government
St. Elizabeth Community Hospital	367	Acute Health Care
Wal-Mart	300	Retail
R.B. Elementary School District	230	Public School
R.B. High School District	150	Public School
CA Division of Forestry	150	State Government
Tehama County Dept. of Education	125	County Government
Blue Shield	120	Insurance
Pacific Gas and Electric	110	Public Utility
K-mart	75	Retail Sales
City of Red Bluff	75	City Government
State Department of Water Resources	54	State Government

** Closure in 1990, 0 employment

Source: EDD, Red Bluff Chamber of Commerce, 1989.

Employment in Tehama County for the 1986 to 1992 period is presented on Table 3. As shown, employment growth has been steady with an overall increase of 7.6%. About 900 new jobs were generated during this period. The largest increases occurred in the Retail, Services and Government sector which added 1,575 new jobs (California Employment Development Department, 1991, C-1-C-5). The Retail, Services and Government sectors are the largest employment generators in Tehama County. Employment in these groups primarily serves the needs of the local population. These areas will likely be large employment sectors in the future. The Manufacturing industry lost 800 jobs during this period due the closure of lumber mills and related industries.

Table 3
Estimated Wage and Salary Employment
Tehama County
1986-1992

	1986	1987	1988	1989	1990	*1991	*1992	Total Change	Growth Rate
Agriculture	1,025	1,075	1,100	1,150	1,075	1,050	1,100	75	7%
Construction and Mining	425	375	400	425	400	450	425	0	0%
Manufacturing	2,725	2,675	2,700	2,575	2,100	1,975	1,925	-800	-29%
Transportation and Public Utilities	425	375	375	325	325	325	350	-75	-18%
Wholesale Trade	175	150	175	200	200	200	200	25	14%
Retail Trade	2,150	2,350	2,475	2,500	2,700	2,875	2,975	825	38%
Finance, Insurance, and Real Estate	425	425	425	425	500	525	550	125	29%
Services	2,100	2,125	2,200	2,225	2,275	2,375	2,475	375	18%
Government	2,425	2,500	2,575	2,625	2,700	2,775	2,800	375	15%
TOTAL	11,900	12,075	12,400	12,450	12,250	12,550	12,800	900	7.6%

*Forecasts

Source: State of California, Employment Development Department

If the growth rate for jobs continues at a similar rate as the previous six years, Tehama County is expected to gain nearly 806 new jobs between 1992 and 1997. Housing will be needed for an increasingly diverse population. Affordable housing for workers in services sector jobs will be needed along with housing for managerial and professional workers. (See Table 3.)

HOUSEHOLD INCOME

Household income by income range for the City of Red Bluff is presented on Table 4. This table shows the range of household incomes for 1979 and 1989 about the City median income.

Table 4
City of Red Bluff
Household Income by Income Range

<u>Income</u>	<u>1979</u>	<u>1989</u>	<u>% Increase/Decrease</u>
Above Moderate	43.7%	41.1%	-2.6%
Moderate	18.8%	20.2%	+1.4%
Low	13.6%	16.3%	+2.7%
Very Low	23.6%	22.4%	-1.2%

Definitions:

Above Moderate Income: over 120 percent of median income
 Moderate Income: 81 percent to 120 percent of median income
 Low Income: 51 percent to 80 percent of median income
 Very Low Income: 50 percent, or less, of median income

1979 Median Income: \$13,585

1989 Median Income: \$19,474

Source: U.S. Census, 1980, 1990

The figures demonstrate a trend for incomes for the City of Red Bluff which will affect the ability to pay for housing.

Median income Figures do not give a good picture as to what is occurring across the range of incomes. The median is the midpoint at which an equal number of households are earning more than, and less than, the median. The range of incomes

on either side of the median may be evenly distributed or clustered. Table 5 shows the percentage of households of given ranges for 1979 and 1989.

Table 5
City of Red Bluff
Household Income

Income Range	1979	1989
\$75,000 +	.62%	2.93%
50,000 to 74,999	1.13%	7.54%
35,000 to 49,999	4.36%	13.12%
25,000 to 34,999	10.68%	14.85%
15,000 to 24,999	28.97%	24.07%
< 14,999	54.24%	37.49%
	100.00%	

Source: U.S. Census, 1980, 1990

ETHNIC COMPOSITION

According to the U.S. Census (1990), Red Bluff is a predominantly white community (91.3 percent), with 1 percent Asian or Pacific Islander, 2.3 percent Native American, .56 percent black, and 8.9 percent Hispanics (1106 people). The diversity of ethnic origins in Red Bluff is well below that of the County or State as well. The Hispanic population in Red Bluff is 8.9 percent compared to 19.2 percent in California. Tehama County has a larger Hispanic population than Red Bluff with about 10.3 percent of the population being of Hispanic background.

AGE OF POPULATION

The City's median age was 32 in 1990, compared to 29.9 for the State. According to the U.S. Census (1990), 30 percent of the population was under 18 years of age, 54 percent between 18 and 64 years of age, and 16 percent was 65 years of age and over. Within the 65 years and over group, 38 percent were men and 62 percent were women. However, as indicated in Table 6, the estimated 1990 population under the age of 18 has increased in the City since 1980 to 30 percent, while the 18 to 64 age population has decreased to 54 percent of the total population. As indicated on Figure 2, the over 65 age group is estimated to have increased to 16 percent.

According to Urban Decision Systems projections, between 1990 and 1995 the trend for an increase in the under 18 population and the over 65 age groups will continue (Tehama Local Development Corporation, 1991).

Table 6
Age of Population
City of Red Bluff

<u>Year</u>	<u>Under 18</u>	<u>18-64</u>	<u>65 & Over</u>
1980 ¹	29 %	57.5 %	13.5 %
1990 ²	30 %	54.6 %	16.0 %
1995 ³	31 %	53.0 %	16.8 %

¹ U.S. Census 1980

² U.S. Census 1990

³ Urban Decision Systems Estimates

Age distribution trends can significantly affect the housing market. An increase in young children may increase the number of families looking for single family homes. The increase in the elderly population can mean a greater need for housing assistance because of the many elderly on fixed incomes. Therefore, it appears that Red Bluff will have a greater need for single family and assisted housing units.

III. HOUSING AND NEIGHBORHOOD CHARACTERISTICS

HOUSING PRODUCTION TRENDS

According to the United States Census (1990), 63 percent Red Bluff's housing stock was comprised of single-family homes in 1990, 80 percent of which was developed prior to 1980. As indicated in Table 7, during the 1980s, single-family construction rates have fluctuated between 12 and 86 homes a year, and averaged 49 homes per year (California Department of Finance, 1990).

Between 1980 and 1990, 316 multifamily units were constructed in the City. Of these, 156 units were two-to four-plex buildings, with the remainder consisting of five or more units. No condominiums apparently exist in the City. There were 107 new mobile homes installed between 1980 and 1990.

Since 1990, 684 additional units have been approved for development, including 334 single-family homes and 350 apartment units. The largest single family subdivision approved is the Willow Creek proposal consisting of 159 lots. The largest apartment complex is "The Villages", containing 300 units. As of February 1992, the largest development project being processed by the City is Airport Acres, located on South Jackson. This project is planned for 264 single-family homes, 117 mobile homes and has 16 acres of land designated for multi-family units.

HOUSING PRICES AND RENT LEVELS

The median owner-occupied housing unit in Red Bluff was valued at \$59,700 according to the U.S. Census (1990). Sixty-six (66) percent of the owner occupied housing units fell within the \$50,000 to \$99,999 value range. Only 2 percent of the homes were valued at \$150,000 or greater. Tehama County's median home was valued at \$68,700 in 1990. Table 8 lists the 1990 median home values for Red Bluff, Tehama County and several surrounding cities and counties. This data illustrates that Red Bluff's housing prices are relatively affordable compared to the surrounding area where the median home was valued at \$84,233 in 1990.

The average resale price of all types of housing in Tehama County was \$125,052 as of January 1, 1992, based on information compiled by the Tehama County Board of Realtors. The majority of newly constructed residential homes are not represented in the Board's multiple listing service data, as most are directly sold through private sales offices or property owners. The Board of Realtors active listing and sales activity for Tehama County is in Table 9. The price range of the only subdivision currently under construction in the City limits is shown on Table 10.

The 1990 median contract rents for Red Bluff were \$291. Sixty-four (64) percent of the contract rents fell within the \$250 to \$499 range. The 1990 median contract rent for Tehama County was \$288 (see Table 8). Table 11 summarizes a sample of

current rents at market rate apartments in the City. Rents for one-bedroom apartments generally range from \$185 to \$325, and \$210 to \$525 for a two-bedroom apartment. According to several property management firms, two-bedroom homes rent from \$400-\$450, and three-bedroom homes from \$600-\$650.

Table 7
 Historic Growth of Households and Housing Supply
 1986-1991

YEAR*	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990**	1991
Total Population	9490	9708	10081	10435	10721	11014	11086	11536	11788	12078	12363	12647
Household Population	9237	9473	9837	10195	10462	10765	10809	11289	11542	11757	11893	12187
Group Quarters	253	235	244	240	259	249	277	247	246	321	470	460
Occupied Housing Units	3684	3822	3943	4128	4240	4356	4386	4655	4728	4772	4812	4881
Total Housing Units	3991	4181	4209	4408	4495	4595	4626	4922	4988	5042	5062	5130
Vacancy Rates %	7.69	8.59	6.32	6.35	5.67	5.20	5.19	5.42	5.40	5.36	4.90	4.85
Single Family Units	2527	2596	2608	2632	2718	2802	2837	2887	2944	2970	3175	3232
Multi-Family Units	1241	1348	1351	1515	1517	1541	1547	1773	1780	1780	1557	1606
Mobile Homes	223	237	250	261	260	252	242	262	274	292	330	292
Population per Household	2.507	2.479	2.495	2.470	2.467	2.471	2.464	2.425	2.441	2.464	2.470	2.481

* January 1 counts

** U.S. Census, 1980, 1990

Source: California Department of Finance, E-5 Reports

Table 8
Median Home Values and Contract Rents

<u>County/City</u>	<u>Median Home Value</u>	<u>Median Contract Rent</u>
Tehama County	\$ 68,700	\$288
Red Bluff	59,700	291
Corning	55,500	275
Shasta County	91,300	358
Redding	95,300	373
Anderson	62,700	333
Glenn County	67,400	278
Willows	65,100	277
Orland	64,400	277
Butte County	94,000	369
Chico	106,100	402
Oroville	62,600	307
State of California	195,500	561

Source: 1990 Census

Table 9
Tehama County Active Listings for Single-Family Homes

<u>Number of Bedrooms</u>	<u>Total Active</u>	<u>Avg. Sale Price</u>	<u>Avg. Day on Market</u>
2 or less	72	\$ 84,340	135
3	159	\$124,563	106
4	33	\$198,582	166
5 or more	7	\$208,286	172

Single Family Sales Activity 10/1/91-12/26/91

<u>Number of Bedrooms</u>	<u>Total Sold</u>	<u>Avg. Sale Price</u>	<u>Avg. Days on Market</u>
2 or less	10	\$ 78,450	124
3	24	\$108,382	106
4	7	\$123,857	87
5 or more	0		

Source: Tehama County Board of Realtors Multiple Listing, January 1, 1992.

Table 10
New Single-Family Sales Prices

Project	Plan	Price Range	Unit Size (sq. ft.)	Bdrm/Ba
<u>Scottsdale Homes</u>				
Country Village	1290	\$101,900	1290	3/2
Country Village	1538	113,900	1538	3/2
Country Village	1564	113,900	1564	3/2
Country Village	1660	117,900	1660	3/2
Country Village	1664	117,900	1664	3/2
Country Village	1932	130,900	1932	3/2
Country Village	2033	135,900	2033	3,4/2
Highland Bluffs	1932	154,900-158,900	1932	3/2
Highland Bluffs	2050	158,900-162,900	2050	3,4/2
Highland Bluffs	2105	172,900	2105	3/2.5
Highland Bluffs	2460	182,900	2460	3/2.5
Highland Bluffs	2470	184,900	2470	3/2.5
Highland Bluffs	2650	191,900	2650	3,4/2.5
Highland Bluffs	2986	212,900	2986	4/2.5

Source: CSUC Center for Geographic Information, 1992.

Table 11
Survey of Market Rate Apartments
(Only a Representative Sample)

Complex Name Address	Total # of Units	Unit Mix	Rent
The Breakers 845 Lakeside Dr.	32	2 bdrm	\$475-525
Cabernet Apts. 15 Cabernet Ct.	228	2 bdrm	\$400
Ellison Apt. Complex 1275 Walnut	94	Studio 1 bdrm 2 bdrm 3 bdrm	\$225 \$290 \$325 \$343
Palm Royale Apts. 725 Kimball Rd.	47	1 bdrm 2 bdrm	\$285 \$310
Trails End Apts. and RV Park 22785 Antelope Blvd.	12	Studios	\$285-310
North Jackson Apts. 905 Jackson Street	6	1 bdrm	\$250-300
McGlynn Apts. 426-428 Rio Street	5	1 bdrm	\$200
West Crest Apts. 575, 585 S. Jackson Street	8	2 bdrm	\$250-350

The Property Management from California Investment Better Homes and Gardens indicated the following rental rates for properties they manage:

1 bdrm apartments	=	\$185-325
2 bdrm apartments	=	\$350-400
3 bdrm home	=	\$400-450
3 bdrm home	=	\$600-650

Source: Personal Interviews with managers - CSUC, Center for Geographic Information, 1992.

Based on site reviews, these figures are representative for the Red Bluff Area.

VACANCY RATES

As indicated in Table 7, vacancy rates ranged from 4.85 percent to 8.59 percent and averaged 6.10 percent between 1980 and 1990. The 1990 U.S. census shows the City with a 1.4 percent homeowner vacancy rate and a 4.5 percent rental vacancy rate (U.S. Bureau of the Census, 1990).

Generally overall vacancy rates between 5-6 percent are considered socially desirable. "A five percent rental vacancy rate is considered necessary to permit ordinary rental mobility. In a housing market with a lower vacancy rate tenants will have difficulty locating appropriate units and strong market pressure will inflate rents. A two percent vacancy rate for owned housing is considered normal" (Association of Bay Area Governments, 1989, 15). The City has expressed a desired rate of 3-5 percent.

Apartment vacancy rates are not recorded by property or apartment complex managers. However, the apartment managers and City officials have indicated that vacancy rates are extremely low, and rental units do not stay on the market for long periods of time.

TENURE OF HOUSING

An increasing rate of rental housing construction in the 1980s compared to historical ratios of owner-occupied to renter occupied housing has brought a shift in the tenure of housing in Red Bluff (see Table 12).

Table 12
City of Red Bluff
Tenure of Housing (Occupied Housing Units)

	1980		1990	
	Unit	Percent	Unit	Percent
Owner Occupied	2025	55.0%	2416	50.2%
Renter Occupied	1659	45.0%	2396	49.8%
Total	3684		4812	

Source: U.S. Census, 1980, 1990

In 1980, 45 percent of all units were renter occupied. By 1990 49.8 percent of all units were occupied by renters.

NEIGHBORHOOD PROFILES AND HOUSING CONDITIONS

Based on information from the 1990 U.S. Census, approximately 18 percent of the current housing stock was constructed prior to 1940, and 23 percent was built between 1940 and 1959. A large percent of the housing stock (38 percent) was built in the 1960s and 1970s when Red Bluff experienced its most rapid population growth. Homes built after 1960 tend to be in good condition. Generally, these newer subdivisions lie on the perimeter of the City to the north and south of downtown.

The City's older housing is concentrated in the downtown core, generally bound by Main Street on the east, First and Fourth Streets to the west, Brewery Creek on the north and Brickyard Creek on the south. These neighborhoods have been generally built out with few vacant sites available for infill development. Infill is encouraged as a policy in the Land Use Element. The homes in these neighborhoods vary both in quality and size. Some pockets of older housing units exist in the Musick Subdivision (Musick and Lay Avenues) and in the vicinity of Locust, Olive, and Orange Streets.

In general, these homes, are small by today's standards. The City also has many well maintained Victorian and Craftman homes in the downtown area, some of which have been converted to commercial uses.

A housing condition survey was conducted by the Community Housing Improvement Program in the City of Red Bluff to determine the total number of housing units, the number of substandard units and a sampling of the degree of rehabilitation need for the substandard units. The survey methodology was based on the criteria set by the State CDBG program for housing condition surveys. The survey evaluated five exterior building condition components: roofs, foundation, siding, windows, and doors. An overall rehabilitation rating of minor, moderate, substantial or dilapidated was assigned to each structure based upon a qualitative evaluation of each of the building components. This report was adopted and incorporated into the existing Housing Element in November, 1991.

The survey revealed 5,042 total housing units in the City, which is consistent with the 1989 Department of Finance, E-5 Report (California Department of Finance). All of the housing in the City of Red Bluff was classified as either standard or substandard and the location of the units indicated on assessor's parcels maps. The survey revealed that 504 units or 10% of Red Bluff's housing stock was substandard (Community Housing Improvement Program, 1990). Using a windshield survey, the quality of 150, or 30% of the substandard units was determined as shown on Table 13.

Table 13
City of Red Bluff
Housing Conditions; Target Area

Condition	# of units	% of units
In need of minor rehabilitation	17	12%
In need of moderate rehabilitation	81	54%
In need of substantial rehabilitation	44	29%
Dilapidated (not suitable for rehab)	8	5%
Total Substandard Units (Sample)	<u>150</u>	

Source: Housing Condition Survey: Community Housing Improvement Program, 1990.

A "target area" for a housing rehabilitation program was determined using information from the housing survey. The target area included an area of high concentration of need in the downtown section of Red Bluff. The approximate boundaries of the target area are west of the Southern Pacific railroad tracks; south of Brewery Creek; north of Brickyard Creek; east of Bulkeley Street and including a section of homes along Musick Avenue to the south. (See Figure 2.) The results and recommendation identified in the Housing Condition Report have been incorporated into the program section of this document.

INVENTORY OF SITES SUITABLE FOR HOUSING

Adequate undeveloped land exists in the City of Red Bluff to meet the housing needs of all income groups through 1997. Vacant lands to support a maximum of 6,790 additional housing units exist under current zoning within the City limits. The maximum potential, from a more practical sense, is likely to be 5,160-5,880 units when actual development occurs. This is due to the fact that minimum lot sizes typically cannot be maintained because of lot shapes, topography and other factors. In addition, once dedication of public streets and other easements are considered, a residential density is typically reduced from the maximum by 2-3 units/acre. Development standards such as setbacks, parking, building heights and open space requirements also impact the overall density reduction. Additional potential exists in all residential zones for either second units or density bonus, which can increase available housing. Generally developed lands within Red Bluff do not contain suitable lot sizes for second units. Second units may be accommodated by relaxed setback standards. Housing units identified as dilapidated or

CITY OF RED BLUFF
TARGET AREA
HOUSING CONDITION

March 1990



Produced by CSU, Chico Geography Department

Figure 2 Map of Target Area Housing Conditions

requiring substantial rehabilitation within the Housing Condition Report will provide limited opportunity to construct new and/or additional residential units.

Since 1986, the following rezones to residential or higher residential designations have occurred:

- 1986 1. .76 acres from M-1 to R-4 (Madison, Hickory and Cedar Streets).
- 2. 12.02 acres from PD to R-1 (Williams Avenue and Sales Lane).
- 1989 1. 4.84 acres from R-1 to R-2 (Block bound by Garden and Park Avenues and Douglas and 4th Streets).
- 2. 70 acres from R-3 to R-4 (Lakeside Drive).

However during the same period, 40.22 acres have been rezoned from residential designations to commercial or industrial designations. No annexations for residential uses have occurred since 1986. As part of the General Plan Land Use Element update, the City of Red Bluff will designate approximately 1670 acres proposed for residential uses within its Sphere of Influence.

The existing and projected housing needs adopted by Tri County Area Planning Council (TCAPC) reveal a need to construct 665 units over the six year period 1991-1997 (Regional Housing Needs for the Tri-County Area Planning Council, 1991). Red Bluff's remaining vacant lands are more than adequate to meet the need. These vacant lands are also distributed across the entire range of densities and locations making them well-positioned to meet the housing needs described in this Element (see Table 14).

Table 14
City of Red Bluff
Vacant Land Inventory and Development Potential

Zoning	General Plan Designation	Maximum D.U./AC	Vacant Acres	Dwelling Unit Potential
R-1	Residential-Low Density	5	920	4,600
R-2	Residential-Low Density	10	55	550
R-3	Residential-Medium Density	15	28.4	426
R-4	Residential-Medium Density	20	252.3	5,046

Source: 1991 Vacant Lands Inventory

Available vacant land within the City limits is primarily concentrated along South Jackson Street and within the Wilcox Oaks Annexation (the north portion of the City between I-5 and the Southern Pacific Railroad). The largest acreages zoned for R-1 are along South Jackson, Monroe and Walnut Streets and Baker and Kimball Roads. The greatest concentration of available R-3 land is along Mill and South Jackson Streets and Luther Road. While the largest designated area of R-4 is along South Jackson near Olive Street and Orange Avenue. In May 1991, a "Master Plan for Infrastructure Capital Improvement Programs and User Charges and Development Fees" was prepared for the City of Red Bluff. This report analyzes existing conditions and deficiencies for water, sewer, drainage and other services. In addition, a Capital Improvement Plan was prepared as part of the document to address the service needs of projected growth and to solve existing deficiencies. The document also includes locations and specifications of improvements needed to serve future developments. Overall, services are available to all vacant sites except Wilcox Oaks Annexation. Extending and upgrading of some infrastructure will be necessary in order to accommodate adequate service capacities. Specifically, the South Jackson Street sewage collection main will need to be upgraded. The low pressure water deficiencies in the airport area will also need to be corrected. Drainage facilities will require some upgrading. All infrastructure except vehicle access must be extended to Wilcox Oaks Annexation prior to development.

IV. HOUSING NEEDS

Housing needs relate to the availability and affordability of housing. These are discussed below. In addition, there are special housing needs of specific groups in the community such as the homeless, the disabled and farmworkers. These special housing needs are addressed in Section V.

TRI-COUNTY AREA PLANNING COUNCIL REGIONAL HOUSING NEEDS DETERMINATION

State legislation enacted in 1980 requires the Tri-County Area Planning Council (TCAPC), which includes Tehama, Glenn and Colusa Counties, to determine existing and projected Tri-County Area regional housing needs for persons of all income levels. Tri-County Area Planning Council also determines each county's and each city's share of regional housing needs. The figures are based on market demand for housing, employment opportunities, land availability, commuting patterns, type and tenure of housing and the provision of a sufficient (4.5 percent) housing vacancy rate. State law requires all cities and counties to consider the regional housing needs share in the Housing Element (Office and Planning and Research, 1988, 67).

The most recent determinations were prepared and published by TCAPC in the "Regional Housing Needs Plan" November 1991 and address the period from 1991 through 1997. Governmental Code Section 65584(c) gives all cities and counties 90 days to review and revise the determinations contained in the TCAPC report (Office and Planning and Research, 1988, 71). The 1990 report was accepted by the City of Red Bluff.

For the 1991 to 1997 period, TCAPC's housing needs determinations call for the production of 665 units. TCAPC's also allocates this need by income group; this allocation is addressed in the following section. In regard to the overall need, Red Bluff has sufficient land to accommodate the 665 units identified as needed for 1991 through 1997. During 1991, 103 market rate units were completed. Currently (March 1991) 106 units are under construction. The vacant land inventory discussed in the previous chapter indicates a potential of 10,592 units could eventually be provided in the present City limits.

HOUSING NEEDS BY INCOME GROUP

Tri-County Area Planning Council is also required by State law to allocate expected housing needs by income category. For the 1991 to 1997 period, TCAPC housing needs determinations call for the production of a total 665 units, of which 186 should be affordable to very low-income households (below 50 percent of median income for the area). 113 should be affordable to low-income households (50-80 percent of

median income), 140 units affordable to moderate-income households (80-120 percent of median income), and the remaining 226 units for above-moderate income families (over 120 percent of median income). As will be discussed in the following section, the private market does not adequately provide new housing affordable for very low and some low income households, no matter what density housing is permitted. However, higher density housing tends to be more affordable than lower density. The City currently has land available to build approximately 5,046 high density units (20 dwelling units/acre), and approximately 426 medium density units (15 dwelling units/acre). This is a sufficient potential supply to meet the expected need, if sufficient subsidies are available to bridge the gap between market rate and affordable rents (see below).

HOUSING COSTS AND ABILITY TO PAY

According to the U.S. Census (1990), 45 percent, or 1943 households, paid more than 25 percent of their gross income for housing. Over two-thirds of these households were renters and more than 53 percent were either low- or very low-income households, as indicated in Table 15. According to State law, a household paying more than 25 percent of income toward housing is considered to be paying more than it can afford ("overpaying") for housing (Office and Planning and Research, 1988, 96). The Federal Department of Housing and Urban Development (HUD) considers overpaying to be over 30 percent of gross income for housing.

Table 15
Estimate of Households Paying Over 25%*
of Their Income for Housing
1990

% Medium Income	Income Category	Renters		Owners		Total #
		#	%	#	%	
(< 50%)	Very Low	736	32%	152	8%	888
(50 - 80%)	Low	293	13%	117	6%	410
(80 - 120%)	Moderate	237	10%	130	7%	267
(> 120%)	Above Moderate	79	4%	199	10%	278
TOTAL		1345		598		1943

*State definition of over-paying. The Federal definition of overpaying is more than 30% of gross income for housing. Source: 1990 U.S. Census

An adequate supply of affordable housing, including rental and owned housing, is essential to satisfying the housing needs of all economic segments of Red Bluff's

existing and projected population. When housing affordability erodes, many residents experience direct negative effects. City residents on fixed incomes are not able to keep up with rising rents. Overcrowding may increase as people turn to sharing homes and apartments to reduce monthly costs. Employers may experience difficulty in attracting and retaining qualified employees as housing costs escalate. Overpayment becomes a greater problem as lower income residents pay a larger percentage of their income for housing.

Median contract rents in Red Bluff increased by 38 percent annually from 1980 to 1990 (U.S. Bureau of the Census, 1980, 1990)

According to local property managers, the 1991 average advertised rent in Red Bluff was \$350-\$400 for a two-bedroom apartment. As indicated in Table 16, the City's very low-income renters can pay up to \$354 per month for rent. Market rate housing is generally not available at an affordable rent to very low income households.

The City's low-income households are estimated to be able to afford between \$355 and \$565 per month (Table 16). As noted earlier in the discussion on city-wide rent levels, the majority of market rate apartments fall into this range and are affordable to low income tenants. However, low income tenants must often compete with moderate and above-moderate income households for the limited supply of rental units, especially in a tight-rental market. Increases in the supply of market-rate apartments can help to meet the City's need for housing affordable to low income households.

While apartments are often affordable to low and moderate income households, for-sale housing tends to be affordable only to those of above-moderate incomes. The average resale price of a for-sale unit was \$125,025. The monthly costs of this average home are well above the affordability level for moderate income households. Older, smaller homes are estimated to sell for between \$50,000 and \$90,000. Assuming a 20 percent down payment, lower and moderate income households could afford to purchase some of these smaller homes. However, the vast majority of for-sale homes are affordable only to moderate and above moderate income households.

Although the median housing values increased 31 percent between 1980-1990, median household income increased by 43 percent during the same period. This would indicate that housing opportunities were enhanced during the 1980s.

Table 16
Affordability Analysis
Based on 1990 Median Income in Tehama County

Income Range ¹	Classi- fication ²	Household Pop. Dist. ³		Maximum Affordable Hsg. or Rent Pymt. ⁴	Housing Price @ 20% Down Payment ⁵
		#	%		
Less than \$14,150	Very Low Income	5601	29.8%	\$354	\$50,280
14,151 - 22,600	Lower Income	3836	20.5%	\$355 - \$565	\$50,281 - \$80,625
22,601 - 33,950	Moderate Income	3746	20.0%	\$566 - \$848	\$80,626 - \$96,600
33,950+	Above Moderate	5563	29.75	\$849+	\$96,601+
Total Households	18,745		100%		

Notes:

1. Income range based on HUD income limits for three person family living in Tehama County (April 1991).
2. Based on HUD median household standards Very Low Income = less than 50% of median; Low Income = 50%-80% of median; Moderate = 80%-120% of median; and Above Moderate = 120%+ of median.
3. Household income distribution based on 1990 U.S. Census data
4. The maximum housing payment is calculated as 30% of income.
5. The maximum house price is based on a 30 year fixed rate mortgage at 10% interest rate with 20% down payment.

Table 17
City of Red Bluff
Home Prices, Rents and Household Income

	1980 ¹	1990 ²	% Change
Median Housing Unit Value	\$45,500	\$59,700	31%
Median Household Income	\$13,585	\$19,474	43%
Median Contract Rent	\$183	\$291	59%

¹Based on 1980 U.S. Census

²Based on 1990 U.S. Census

ENERGY CONSERVATION OPPORTUNITIES

Rising energy costs have highlighted energy consumption patterns and opportunities for energy conservation. Energy use in residences and residential land development practices are perceived to offer a means for increased conservation and reduced energy use and costs. State regulations require that housing elements address such opportunities.

The California Energy Commission has developed standards for new residential construction and additions to dwellings. These standards are known as Title 24 requirements. Title 24 requirements are in addition to conservation requirements of locally adopted Building Codes. The City of Red Bluff enforces compliance with the Title 24 requirements. The Energy Conservation Section of this General Plan discusses current State law regarding passive and natural heating and cooling systems in subdivisions, solar shade control as well as Title 24 energy standards for residential buildings.

The City of Red Bluff maintains a variety of policies which are inherently energy and cost efficient. These include:

- Encourage infilling of vacant parcels.
- Planning and zoning for multi-use development with higher residential densities adjacent to future employment.
- Promotion of passive and active solar design elements and systems.
- Permitting common wall and cluster development.
- Standards for street widths, landscaping of streets and parking lots to reduce heat loss or provide shade.
- Inclusion of energy conservation features in new and existing housing.

V. SPECIAL HOUSING NEEDS

Within every community there are specific populations which have specialized housing needs. This section of the Housing Element discusses special housing needs, including the elderly, homeless, disabled, female-headed households, large families, overcrowded households, mentally ill and farmworkers living in Red Bluff. In addition, housing needs due to loss of Federal and local subsidies are also addressed.

ELDERLY

In 1990, 16.3 percent (2,019 persons) of Red Bluff's population was over 65 years old (U.S. Census, 1990). This is up from 1980 when seniors represented 12.3% of the population.

Data from the 1990 Census indicate 11.2 percent of the elderly live in group quarters (of which 80 percent are institutionalized) and 88.8 percent live in households. Of those living in households approximately 32 percent live alone, 53 percent live with other family members and 15 percent live in households with unrelated individuals.

Affordability of housing is critical to seniors, especially seniors living alone. In 1980 seniors comprised 10.1% of all individuals in poverty, but seniors who were also unrelated individuals comprised 52% of all unrelated individuals in poverty (U.S. Bureau of the Census, 1980).

Housing specifically for the elderly in Red Bluff consists of convalescent hospitals, congregate care facilities, board and care homes, and independent elderly housing. The level of care varies at each of these facilities, with convalescent hospitals being the most intensive and independent living being the most independent. "Congregate care" facilities provide for group dining but do not necessarily provide other type of care. A summary of the facilities is included in Table 18.

Table 18
Total Number of Elderly Housing Units
Red Bluff

<u>(B)</u>	<u># of Facilities</u>	<u># of Units(U)/Beds</u>
Total Independent % Subsidized Low Income Units	7	325 (U) 57%
Total Congregate Care % Subsidized Low Income Beds	2	142 (U) 50%
Total Licensed Rest Homes	4	10 (B)
Total Convalescent Hospitals % Accept Medicare & Medi-Cal	3 100%	178 (B) N/A

Source: Center for Geographical Information, 1992.

According to Area Agency on Aging (AAA), there are three convalescent hospitals in the City of Red Bluff. These facilities can care for 178 patients. At present there are no vacancies suggesting that the need for this type of market-rate senior housing is not adequately met. AAA states that it is often difficult to place elderly Medicare and Medical patients. Red Bluff has approximately 4 board and care facilities with the capacity to house 70 persons.

The City has one market rate congregate care facility (Tehama Estates) with a total of 72 units. The rents, including two to three meals a day, range from \$520 a month for a studio to \$1,750 for a two bedroom, two bath apartment. Assuming \$100 of the monthly payment goes for food and a household spends 30 percent of its income on housing, a minimum income of \$27,200 would be required for a studio and a substantially greater income would be required for a two bedroom unit. These income levels fall into the moderate- and above-moderate income categories.

The only congregate care facility with subsidized units is Villa Collumba, with 70 units and a waiting list of 20 people. The Federal Subsidies at Villa Collumba are subject to termination before 2003 as discussed more fully in a later section. However, the project is owned by St. Elizabeth Housing Corporation which does not intend to increase rent levels.

Table 19 presents a summary of the apartment and congregate care projects.

Table 19
Survey of Selected Elderly House Complexes
Apartments, Congregate Care and Rest Homes
City of Red Bluff

Location	Units	Waiting List	Subsidized Units	Date Opened	Comments
<u>APARTMENTS:</u>					
Red Bluff Apts. 111 Sale Lane	72	Yes	Yes	1979	Pay 30% 32 1BR, 32 2BR, 8 3BR
Phoenix Apts. 1323 Deborah Dr.	46	Yes	Yes	1980	Pay 30%
Ellison Apts. 1	50	Yes	No	1972	
Ellison Apts. II	44	Yes	No	1974	
1275 Walnut Street					
Lassen View Apts. 855 Luther Road	45	Yes	No	1984	All 1BR Pay 30%
Jackson Manor 755 Luther Road	44	Yes	Yes	1982	All 1BR Pay 30%
Mercy Riverside Manor 230 Sycamore Street	24	Yes	Yes	1987	All 1BR Pay 30%
Balyless Gordon Apts. 1815-1885 Walnut	46	Yes	Yes	1992	Some Sub- sidized
<u>CONGREGATE CARE:</u>					
Villa Collumba 460 Mair	70	Yes	Yes	1983	All 1BR Pay 30%
Tehama Estate 750 David	72	No	No		Studios
<u>REST HOMES:</u>					
Annies Acres 220 White Road					
Aquinos Shady Rest 70 Gilmore Road	22	Yes	No		

Country Manor
21125 Luther Road

New Hope Guest Home 22131 Palermo Road	6	No	No	1984	Residential Men Only
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CONVALESCENT:

Brentwood Convalescent 1795 Walnut	55	Yes	*	1972
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Care West Cedars 555 Luther Road	58	Yes	*	1967
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Tehama Co. Convalescent	65	Yes	*	1978
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*Medicare and Medi-Cal

Source: Center for Geographical Information, 1992.

There appears to be an adequate number of units available for moderate- and above-moderate elderly households. However, based on the extraordinary demand for low-income elderly housing and the increasing elderly population, additional low-cost independent units, and board and care homes are needed. The Rural Communities Housing Development Corporation (RCHDC) is currently working on a proposal to develop a 30 units senior housing complex in Red Bluff.

HOMELESS

According to the House Manager of the Victory House, there are approximately 30-35 homeless adults at any given time in the City. It is estimated that 5-15 homeless people are seeking shelter on any given night. A survey of those using the shelter found that about 80 percent of the homeless are single males, 15 percent are single females, and 5 percent are families (usually women with children). Local service providers in the area indicate that Red Bluff has a number of homeless individuals suffering from mental disorders (see Mentally Ill). According to the 1990 U.S. Census, 31 homeless adults were counted in shelters and six individuals were "visible in street locations" (U.S. Bureau of the Census, 1990).

Red Bluff has one homeless shelter which provides housing for a limited period of time. The Victory House which opened in 1984, can accommodate approximately 10 single men and 4 women per night. The shelter houses an average of 6 men and 1 women a night. Maximum stay is 7 days in a month.

Additional housing for homeless in Red Bluff is provided by low cost motels. The motel rates range for \$20 to \$35 nightly. While motels may provide shelter on a short-term basis, they are not an affordable long-term solution (\$750-1,050 for 30 days).

Through the Welfare Department's Homeless Assistance program, families eligible for Aid for Families with Dependent Children (AFDC) assistance can receive \$30 per day for four weeks. Families are only eligible for this assistance once in a two year period. In addition, the Welfare Department will provide the last month's rent and security deposit on an apartment. During the month of February 1992 29 families in the County received both temporary and permanent assistance from the Welfare Department. This was down from February, 1991 when 33 families received both temporary and permanent assistance. According to the Welfare Department requests are greater during the winter months, but requests for homeless assistance continue year around.

Although Red Bluff does not have a conspicuous homeless problem, service workers suggest a number of individuals and families sleep in their cars, alleyways, or stay with friends in overcrowded units. Furthermore, according to local service workers, many families are barely able to afford their current housing costs. As housing prices in Red Bluff continue to rise, the number of homeless may increase.

PHYSICALLY DISABLED

The 1990 Census measured work disabilities by mobility and self-care limitation status for individuals over 16 years of age. Although the census count excluded children, it is a good indicator of the need for housing which serves the disabled because transportation access disabilities are often similar to those which require special consideration in the design of housing.

The 1990 Census indicated that Red Bluff had 1,546 individuals with work disabilities of which 558 were elderly. In 1989, 1,298 disabled persons were receiving supplementary security income (SSI) in Tehama County.

The disabled often have special design needs related to accessibility to bathroom facilities, doorway clearances, kitchen facilities, parking areas, pathways and entrances. many disabled often need single-story, ground-floor units (preferably with security features) and proximity to public transportation. The 1990 Census figures indicate that there are a high demand for special housing for the physically disabled.

In accordance with State standards, all new housing projects are required to provide disabled parking, ramps and curb cuts. In addition, as of January 1, 1990, apartments with five or more dwelling units or five percent of all apartments on a building site are to comply with the disability access regulations. These standards should lead to an adequate supply of market-rate apartments accessible to the disabled in the future.

The disabled have the same or a greater need for affordable housing than non-disabled households. Lack of affordable housing can be a major obstacle in housing the disabled. Many disabled individuals are unable to support themselves financially and must rely on the income provided by social security insurance. For this reason, many individuals capable of taking care of themselves must live with relatives or in a board and care facility. According to the Housing Foundation (a non-profit advocacy organization), as many as 25 percent of disabled individuals living in board and care facilities would function better in a less restrictive environment (City of Napa Housing Element, 1991).

FEMALE-HEADED HOUSEHOLDS

According to the U.S. Census (1990), 644 or 13.4 percent of Red Bluff households consisted of families headed by females with no husband present. An estimate 536 or 83 percent of these have children under 18.

The absence of an additional wage-earner and the lower income earned by women workers reduce the ability of single-parent households to find affordable housing. Affordability is a significant housing problem for single-parent households generally, and those headed by females in particular. Of the total number of related children under the age of eighteen and living in poverty, 66 percent live in households headed by females with no spouse. Only 5 percent of the children in poverty live in male headed households.

An indication of the economic hardship experienced by female-headed households is found in the statistics for Aid to Families with Dependent Children. In two years from 1988 to 1990 the number of individuals receiving aid under the AFDC program in Tehama County increased by 87 persons. In 1990, 4,593 or 9.2 percent of the County's population receive aid under this program. Of those AFDC recipients who were 16 years or older 79 percent were female in 1990 (California Employment Development Department, 1991, 28).

Several programs have been helpful in assisting some female-headed households with their long-term and temporary housing needs. As previously stated, the Welfare Department provides short-term financial assistance and relocation assistance to families eligible for AFDC grants. Further, the Victory House can house four women.

Some female-headed households, especially those with children, face significant difficulties in finding suitable housing at an affordable cost. There also appears to be a need for additional financial assistance for working women who do not qualify for AFDC grants. Additionally, development of a family housing facility, especially for low- and moderate-income parents, would help single parents provide a stable environment for their children.

LARGE FAMILIES

The Census defines large households as those with five or more persons. Households with more than one person per room, excluding the bathroom, are considered overcrowded. Thus, large families require living units with at least five rooms.

In 1990, 441 households or 9 percent of Red Bluff's households had five or more persons, slightly lower than the 10.7 percent found countywide (U.S. Bureau of the Census, 1990). Household sizes have increased slightly between 1980 and 1990. In 1980, 8.6 percent of the households had five or more persons, 39 percent of those were renters. Of the 441 large households in 1990, 51.7 percent were renters.

In 1990, 53 percent (2,681) of the City's housing units had five or more rooms. This is well over the number needed to accommodate the large families. However, the Census figures do not indicate how many of these large families actually live in adequate sized units. In fact, while there was a sufficient number of large units to satisfy the number of large families in 1990, 6.6 percent of all families (318) were overcrowded (more than one person per room) of which 75 percent were renters (U.S. Bureau of the Census, 1990).

In recognition of the need for large, affordable housing units, Mercy Family Housing is sponsoring the development of a 50-unit rental housing project with 14 two-bedroom, 26 three-bedroom, and 10 four-bedroom units. These units will be affordable to 50 percent of the area median income, and will meet Federal regulations regarding accessibility for handicapped and disabled families.

OVERCROWDING

Overcrowding is defined by the U.S. Census as more than 1.01 persons per room and severe overcrowding is defined as more than 1.50 persons per room. The U.S. Census (1990) showed that only 6.6 of Red Bluff's 4,767 occupied housing units, or 318 households were overcrowded. Approximately 45 percent of these were severely overcrowded.

Table 20
Overcrowded Households
City of Red Bluff

	<u>Rent</u>	<u>Own</u>
Overcrowded Households	119	57
Severely Overcrowded Households	121	21

Source: U.S. Census, 1990

The information on Table 20 indicates that approximately 75 percent of overcrowded households rent their homes, a significantly higher percentage than the general population.

The trend has been an increase in the number of units experiencing overcrowding. In 1980, only 4.2 percent of the City's housing units were overcrowded. The proportionate number of houses with five or more rooms has remained much the same since 1980.

Overcrowding is largely an affordability issue, affecting primarily very low-income households and larger low income households who cannot afford an adequate sized unit. Based on the waiting list for Farmers Home Section 502 Housing, of the 494 families on the waiting list as of September 1991, 190 sought a unit with more than two bedrooms, and 42 families (representing 8 percent of the total) were interested in a unit with four bedrooms or more. These figures suggest that the need is greatest for two- and three-bedroom units.

As discussed under "Farmworker Housing" the problem of overcrowding is particularly pronounced for farmworkers. According to a study completed in 1988 by the Department of Housing and Community Development, most rental units for farmworkers are small; most farmworker families are above average in size; so most migrant farmworker families live in overcrowded housing (California Department of Housing and Community Development, 1988, 24).

MENTALLY ILL

Individuals exhibiting symptoms of a severe mental illness face significant difficulty finding affordable housing in any housing market, but especially in an area with very low vacancy rates. The Tehama County Mental Health Services currently has a case load of approximately 400 mentally ill people, most of whom were originally from Tehama County. Statistics regarding the number of people from the City are not available. Some of the problems with the mentally ill is discussed in an earlier section on Homeless.

Red Bluff has one residential treatment facility for the mentally ill, a 14 bed facility in Red Bluff. Currently there are no vacancies and a number of people on a waiting list. Most of the clients of the facility are on SSI which provides sufficient money to cover the rent. Additional residential treatment facilities are available at a satellite facility in Chico, 45 miles away.

The Far Northern Regional Center reports that there are 7 board and care homes for the developmentally disabled located in the City of Red Bluff. These board and care homes have a total of 40 beds with 6 of these beds set up for non-ambulatory patients. Service workers believe that there is a lack of non-ambulatory beds in the service area.

Tehama County Mental Health Services refers many clients to the Victory House homeless shelter for temporary housing.

Based on conversations with the operators of the transitional housing and board and care facilities, there is a need for additional special housing for the mentally ill.

FARMWORKER HOUSING

The Tehama County is known for its olive and nut crops. Employment Development Department (1991) estimates farm employment in Tehama County to vary from a peak of 540 people during the harvest season to a low of 60, with an average annual employment of 250 workers.

Profile of the Tehama County Farmworker

Until recently, little data was available on the profile and housing conditions of farmworkers. In 1991, Community Housing Improvement Program (CHIP) conducted an assessment of the housing needs of local farmworkers. This recently-completed study (one of the few conducted in California) provides valuable data on Glenn and Tehama Counties' agricultural workers. Two surveys were conducted to gather information on agricultural workers' housing conditions: an in-field farmworker survey and a growers survey. The survey polled 255 farmworkers and 207 growers during the months of August and September, 1991. The 207 growers surveyed employed 3,319 farmworkers.

The farmworker survey found that about 12 percent of the workers are employed in agriculture year round and approximately 40 percent are seasonal workers (working less than nine months per year in agriculture but who consider Tehama/Glenn Counties their year round place of residence). About 50 percent of farmworkers are migrant workers or workers that travel over 50 miles from their home base and establish a temporary residence for a limited period of time such as the harvest seasons. None of the farmworkers surveyed listed Red Bluff as their temporary or permanent place of residence.

The study found that 38 percent of the Tehama County farmworkers are single men and 62% of Tehama County farmworkers were married. Seventy-four percent of farmworkers did not migrate with their families, although some migrant workers travelled with male relatives.

The average age of farmworkers surveyed was 36 years old. Employment stability was found to be the norm for local farmworkers: the average employee had been working with the same employer for three years and almost 20 percent had been employed for more than five years by the same employer.

According to the farmworkers' survey 92 percent of the farmworkers reported earning less than \$10,000 per year. Forty-eight percent of the farmworkers reported earning less than \$5,000 per year. Farmworkers as a group are low income or very low income based on the County median income.

The average household size of farmworkers is considerably above the Tehama County average of 2.60. The average size of a farmworker household is estimated to be 5.82 people.

Housing Conditions of Farmworkers

The survey included an assessment of farmworker housing type and conditions; and farmworker income. Many of the farmworkers surveyed have no housing and either camped in the orchards or at a nearby campground. Farmworkers that shared housing were generally overcrowded. Because the migrant population consists mainly of men without their families, the majority share housing costs with other male workers. CHIP found overcrowding tended to result from economic decisions made by workers to minimize housing costs.

The average rent paid by all farmworkers was \$232 per month. Most farmworkers reported their rentals to be in fair condition.

Thirty-three percent of the growers reported providing housing for farmworkers. Of the growers that provided housing 84 percent were long-term workers, 8 percent were seasonal laborers and 6 percent were migrant workers

The great majority of farmworkers surveyed (66 percent) reported living in the orchard or field in campers, cars, vans or trailers. Some farmworkers reported living in garages near their place of work.

Of the farmworkers surveyed, 95 percent stated that they would live in family apartments if they were available. The same group of farmworkers said that if housing were to be built 65 percent would prefer single family homes. Only 12 percent of the farmworkers would prefer dormitories as temporary housing.

TERMINATION OF FEDERAL SUBSIDIES

Approximately 117,000 Federally-subsidized low-income rental housing units in California are in jeopardy of being lost from the supply of affordable housing as a result of prepayment of Federal contracts with for-profit owners and/or termination of subsidies and rent restriction with the U.S. Department of Housing and Urban Development (HUD) (Housing Element Analysis: Preservation of Assisted Units, 1991). Up to 234 units of affordable housing in Red Bluff are at risk of conversion to market-rate housing by the year 2008, of which 94 may be eligible for conversion between 1990 and 1995. After the year 2000, the City has 144 units subject to termination (Table 21). There are no additional units subsidized through State or local programs that are at risk during the coming decade.

In 1990, the potential loss of Federally-subsidized rental housing was partially addressed by Congress in legislation. The "National Affordable Housing Act of 1990" establishes stringent prepayment restrictions, and establishes a process whereby local and State governments can play a significant role in conserving affordable housing. The law creates a mandatory process authorizing HUD to preserve the housing or permit prepayments in accordance with an approved "Plan of Action" (Housing Element Analysis: Preservation of Assisted Units, 1991).

In general, the law allows for two ways projects can be preserved. First, HUD must offer a package of incentives to existing owners ensuring a return (as defined in the law) on investment. Second, projects which meet certain cost criteria may elect to transfer voluntarily to a "priority purchase": a nonprofit entity, tenant group or public agency. Alternatively, if the project does not meet the criteria, it must still offer the project first to priority purchasers. However, if no offer is made to purchase the property by a priority purchaser, the owner may prepay the loan and convert the units to market rate.

The 94 unit Ellison Apartments I and II are owned by a private, for profit company. In the event this company elects to discontinue providing below-market-rate housing, the City will need to consider opportunities for preserving the site through purchase or other means (e.g., a grant to a non-profit entity). This project is subject to termination of subsidies in 1992. The buildings were developed in 1972 and 1974 and have been generally well-maintained since that date.

Without Federal assistance, the cost to maintain the Ellison Apartments I and II units as affordable would be substantial. For example, assuming the rent contribution affordable to the tenants would average \$247 per month for a three-person household (based on maximum rent levels set by HCD for Tehama County-Rental Housing Construction Program, 1991), a rent shortfall of approximately \$153 per month per unit would exist. This is based on the difference between the market rent levels achieved for existing two-bedroom units (\$400 per month) and what the tenants could afford. This projected shortfall would total \$14,382 per month for the Ellison Apartments I and II alone, representing an annual subsidy of \$172,584.

If the City or another non-profit entity were to sponsor the development of replacement units the construction and land costs are estimated to average \$75,000

per unit. This figure is based on a \$11,000 per-unit land cost and \$67 per square foot in construction costs for an average 850 square foot unit. To replace the 50 units owned by a private for-profit company and subject to termination in the next five years, the cost would total approximately \$3,750,000, or significantly more than the likely preservation cost.

The Phoenix Apartments have a section 8 contract that is due to expire on December 31, 2000. A more detailed analysis of the preservation of affordability of these units will be required as part of the next Housing Element update cycle in 1997. This is three years prior to the earliest date the owners could potentially opt out. However, using the same analysis as described for the Ellison Apartments, the 45 units would result in an approximately \$6,885 monthly and \$82,620 annual shortfall. The replacement cost for the Phoenix Apartments would be approximately \$3,375,000, which is also more than the preservation cost.

The organizations noted below have the legal and managerial capacity to acquire and manage the Ellison Apartments I, Ellison Apartments II and the Phoenix Apartments.

- * Rural Communities Housing Development Corporation, 237 E. Gobbi Street, Ukiah, California 95482 (707) 463-1975.
- * Community Housing Improvement Program, 1001 Willow Street, Chico, California 95928 (916) 891-6931.
- * Mercy Family Housing, California, 2300 Adeline Drive, Burlingame, California 94010 (415) 340-7417.

In addition, CDBG funds, or HOME funds could be used to assist in preserving these assisted housing units should the owners decide to opt out of their respective programs.

Table 21
Inventory of Low Income Rental Units Subject to
Termination of Federal Mortgage and/or
Rent Subsidies By the Year 2008

Project Name and Address	Elision Apts. I 1275 Walnut St. Red Bluff, CA 96080	
Owner Name and Address	Sierra Association - NP P.O. Box 97311 Bellvue, WA 98009	
FHA Project #	13644141	
Section of Act	236(J)(1)	
Owner/Tenant Type	LD FAM	
Rent Sup, Flex, TPA		
Loan Amount	\$587,500	
Loan Term, Interest Rate	40 7.00	
Processing Status	Final Endrs Current	
Final Endorsement Date	06Dec72	
Section 8 Contract #		
Program/Finance Type		
Section 8 Type		
HAP Agree/Exec Date		
	FHA	Section 8
Total Units	50	0
Total Elderly	0	0
Earliest Date of Subsidy Termination	06Dec92	

Project Name and Address

Ellison Apts. II
1275 Walnut St.
Red Bluff, CA 96080

Owner Name and Address

Sierra Association - NP
P.O. Box 97311
Bellvue, WA 98009

FHA Project #
Section of Act
Owner/Tenant Type
Rent Sup, Flex, TPA

13644212
236(J)(1)
LD FAM

Loan Amount
Loan Term, Interest Rate
Processing Status
Final Endorsement Date

\$475,800
40 7.00
Final Endrs Current
10JUL74

Section 8 Contract #
Program/Finance Type
Section 8 Type
HAP Agree/Exec Date

Total Units
Total Elderly

FHA	Section 8
44	0
0	0

Earliest Date of Subsidy Termination

10JUL94

Project Name and Address

The Phoenix Apartments
1323 Deborah Drive
Red Bluff, CA 96080

Owner Name and Address

Stanley J. Palermo
P.O. Box 257
Corning, CA 96021

FHA Project #
Section of Act
Owner/Tenant Type
Rent Sup, Flex, TPA

13635602
221(D)(4)
PM FAM

Loan Amount
Loan Term, Interest Rate
Processing Status
Final Endorsement Date

\$1,303,500
40 8.00
Final Endrs Current
31DEC80

Section 8 Contract #
Program/Finance Type
Section 8 Type
HAP Agree/Exec Date

CA300007002
NEW CON FHA
27MAY80 31DEC80

Total Units
Total Elderly

FHA	Section 8
46	45
0	0

Earliest Date of Subsidy Termination

31DEC00

Project Name and Address

Villa Columba
460 Main Street
Red Bluff, CA 96080

Owner Name and Address

St. Eliz Housing Corporation
Sister Mary Columba
Red Bluff, CA 96080

FHA Project #
Section of Act
Owner/Tenant Type
Rent Sup, Flex, TPA

136#H025
202 Elderly
NP WAH

Loan Amount
Loan Term, Interest Rate
Processing Status
Final Endorsement Date

\$3,009,800
40 9.00
Final Endrs Current
13APR83

Section 8 Contract #
Program/Finance Type
Section 8 Type
HAP Agree/Exec Date

CA30T802001
NEW CON SEC 202
SEC 202/8
29SEP 81 17JAN83

Total Units
Total Elderly

FHA	Section 8
70	70
70	70

Earliest Date of Subsidy Termination

13APR23 17JAN03

VI. STATUS AND EVALUATION OF EXISTING HOUSING PROGRAMS

The 1986 Housing Element described 12 programs or actions to be undertaken to assure the continued development, maintenance and improvement of housing within the City. The programs addressed housing affordability, condition, quality and access to housing opportunities for special housing groups. This section of the Housing Element summarizes the City's progress in achieving the program goals during the 1986-1991 planning period. A program-by-program evaluation is included at the end of this chapter. This analysis has been used in identifying objectives, policies and programs in this updated Element.

OVERALL PRODUCTION

Between 1986 and 1990, the Regional Housing Needs Determinations published by HCD indicated that the City of Red Bluff would need to develop 693 units (Red Bluff General Plan Housing Element, 1983). This level of production would satisfy the then existing shortage in 1980, plus address the demand over the remaining decade. An additional 224 units was added to the regional housing needs figures in 1990 for the interim planning period between 1990-1992. During the 1986-1990 period, an estimated 436 units (based on State Department of Finance figures) were produced within the City of Red Bluff, or 257 units less than the five year need established by HCD. While the City has no estimates for residential development within unincorporated islands, if such development were included, the shortfall would likely be negligible.

PRODUCTION OF AFFORDABLE HOUSING

HCD also distributed projected housing needs for the 1986-1990 period by income level. HCD's distribution was derived from the 1980 U.S. Census, modified through a complex formula. Of the 693 units identified as needed between 1986 and 1990, 160 (24 percent) were needed for households with very-low incomes, 103 (15 percent) for low-income households, 194 (28 percent) for moderate income households, and 230 (33 percent) for above-moderate income households.

In August 1990, the Department of Housing and Community Development extended the planning period of the housing element to July 1, 1992. The distribution of projected housing needs by income groups for the extended period was 54 units very low, 34 units low, 63 units moderate and 73 units above moderate. The following discusses the City's progress in meeting these needs.

Thirty-eight single family homes were produced in the previous planning period through the Farmers Home Administration's Section 502 program. These units were

built using the self-help method and were available to low and very low income residents.

With funding from Proposition 84 and federal tax credits, a 46 unit family apartment complex was built in Red Bluff. The Bayliss Garden Apartments were completed in 1992 and had 6 1-bedroom apartments, 20 2-bedroom apartments and 20 3-bedroom apartments. Nineteen of the units are set aside for low and very low income residents. The remaining 27 units will be available to residents with Section 8 vouchers or certificate or will be rented at market rates.

The City of Red Bluff currently has 469 subsidized apartment units and 402 single family homes built through the Farmers Home Administration 502 program. The 871 subsidized housing units represents nearly 20 percent of the housing units in the City.

New market rate housing has not been affordable to very-low income households anywhere in Tehama County for many years, if ever. New apartments are occasionally affordable to the upper end of the low income range in Red Bluff. The high cost of new housing is attributed to rapidly escalating land and housing prices, strong demand and insufficient production levels. Given high production costs, it is not feasible for the private market to construct new housing affordable to very low income and many low income households.

Cities can assist the development of affordable housing in many ways, including providing sufficient land at medium and higher densities to allow for the development of apartments, townhouses and condominium units. Cities can also provide a mix of incentives, requirements and subsidies to encourage the private market to develop more affordable housing. In most communities, the housing units built which are affordable to lower income household received one or more forms of direct subsidy. In the past, most direct subsidies were provided through various Federal programs. In addition, various State and Federal tax incentives encouraged the development of new affordable housing. These direct and indirect subsidy programs have been significantly reduced in the past 10 years, as discussed in a subsequent section (California Department of Housing and Community Development, 1987, 1).

HOUSING FOR RESIDENTS WITH SPECIAL HOUSING NEEDS

Mentally Ill

Tehama County Mental Health Services developed a 14 bed residential care facility in Red Bluff.

MAINTENANCE OF THE HOUSING STOCK

The City of Red Bluff sponsors a housing rehabilitation program through the City's CDBG allocation. The City has received approximately \$350,450 to capitalize a revolving loan fund. Loans are made available for the rehabilitation of housing units occupied by low- or very low-income tenants or owners. Over the last five years 5 units were rehabilitated through the City rehabilitation program at an approximate cost of \$15,000 per unit.

ENERGY CONSERVATION

SHHIP coordinated a PG&E insulation program which is funded by PG&E and the State. In 1991 420 homes were insulated through the program. In addition, during the planning period, the City's zoning ordinance was modified to encourage the use of solar energy.

IMPLICATIONS FOR NEW PROGRAMS AND POLICIES

The goals set for the previous programs were very vague and tied to specific funding programs. Many of the funding programs were unavailable in the previous planning period due to government cutbacks and competition with other jurisdictions. The new policies and programs for the 1992-1997 are more specific and the set specific objectives as appropriate. Each program designates a particular agency or department responsible for carrying out the program tasks.

EVALUATION OF PROGRAM ACHIEVEMENTS, 1986-1991

I. POLICIES AND PROGRAM

Policy 1

To become actively involved in federal and state housing assistance programs directed toward new construction, rental assistance and rehabilitation. The local government will apply for such assistance where appropriate to local needs and contingent upon the determination that a reasonable probability of success in securing funds can be assured.

Evaluation

The City has utilized Community Development Block Grant Funds (CDBG) to assist several housing projects and to provide rehabilitation funds. CDBG Funds were applied for and received to rehabilitate 16 housing units and to provide assistance to a developer of affordable housing units. The City also applied for CDBG funds to provide infrastructure improvements to a low income senior housing project.

The City has received funds from the Department of Housing and Community Development to perform a city-wide housing condition survey, and also a grant to conduct a needs assessment and produced a funding application.

Policy 2

To encourage the use of federal and state housing programs by the private sector, non-profit corporations, and individuals for the purpose of expanding housing opportunities for person of low and moderate incomes. Active support will be given to those which are privately initiated.

Evaluation

Several projects have been approved in which private non-profit corporations have developed affordable housing. The City approved two small subdivisions of "self-help"

single family homes funded by the Farmers Home Administration. The City is currently working with Mercy Family Housing to develop 50 housing units for "very low" income tenants utilizing State Rental Housing Construction Program funds and Federal tax credits. The City has also assisted Rural Communities Housing Development Corporation (RCHDC) in the development of a senior housing complex. The City has devoted many hours of staff time in assisting private, non-profit developers of affordable housing.

Policy 3

Undertake strategies to remove government and market constraints on the provision of adequate housing opportunities. Administrative and/or service system capacities will be expanded where necessary to achieve this objective.

Evaluation

The City has developed computerized information systems for the Planning and Building Departments in order to speed up the permit approval process and to allow for ready access to information. The City is currently developing a Geographic Information System (GIS) in which planning and building information will be available on a data base for each parcel in the City limits.

In an effort to mitigate the high cost of fees in residential development the City has adopted an ordinance which allows for a credit on impact fees as determined by the City Engineer or City Council.

Another strategy to help offset the high cost of residential development is the Planned Development Use Permit. The Planned Development allows a means of granting exceptions to City Land Division Standards and zoning codes on the specific needs of a project. One example of this is the senior housing project by RCHDC on Jackson Street. The City allowed the project to be constructed with fewer parking spaces since seniors did not need as many spaces.

The City has adopted zoning regulations which specify the maximum dwelling units per acre for each zoning district.

Policy 4

Encourage residential builders and developers to provide for the inclusion of dwelling units suitable for sale or rent to low-moderate income households within new residential developments through the provision of incentives.

Evaluation

The City has adopted a set of Land Division Policies to guide the development of land in the City. Under these policies density bonuses will be allowed for the development of affordable housing units.

Policy 5

Accommodate manufactured housing within existing community fabric and adopt design standards assuring its compatibility with the host community character.

Evaluation

The City has eliminated Residential-Mobile Home (R-MH) Zoning District. Currently mobile homes are allowed in all "R" districts. The City has adopted specific design standards (Section 25-56-g of Zoning Regulations) for mobile homes. To assure compatibility with existing neighborhoods these standards specify the conditions in which mobile homes must comply to be placed in any residential zoning district in the City limits.

Policy 6

Monitor the conversion of rental housing to condominiums and, if necessary, adopt an ordinance regulating future conversions.

Evaluation

Chapter 10 of the City Code establishes a criteria for the conversion of rental housing to condominiums. This section of the City Code also provides guidance to the Planning Commission in approving conversion projects and limiting the number of conversions per year. No condominiums exist in the City. Condominium conversions are generally initiated by private citizens, and to date no formal conversion applications have been submitted to the City.

Policy 7

Encourage conformance with building codes through enforcement procedures to ensure that housing is of safe and sanitary construction and that hazards to public health and safety do not exist.

Evaluation

The City has adopted the 1991 Uniform Building Code, Uniform Plumbing Code, Uniform Housing Code and Uniform Mechanical Code. The City has also adopted the 1990 National Electric Code.

The City has adopted steps in the City Code to enforce compliance with the adopted codes.

The City of Red Bluff has also adopted a set of regulations for flood damage prevention. These regulations assist City staff in guiding the development in flood prone areas of the City.

Policy 8

Encourage and support the private development of farmworker housing.

Evaluation

The City has worked with a local private developer interested in the problem of farmworker housing. The City has completed inputting data into the database related to the needs of farmworkers. The City has applied for and received funding to survey and document the need for farmworker housing. The data will be used by Mercy Family Housing for their 50-unit funding application.

The City has provisions in their Land Development Policies to allow for flexibility in the development of affordable housing including allowing density bonuses and creating Planned Unit Developments. The City will consider exceptions to zoning regulations if the need is justified.

Policy 9

Work in close cooperation with other Tri-County governments to insure:

- 1. The orderly development of unincorporated lands adjacent to urban incorporated areas; and*
- 2. The consistency of land use policies and development standards in those areas.*

Evaluation

The City of Red Bluff has maintained a good working relationship with the Tehama County Planning Department. Cooperation with the County has included coordinating data base files, starting an assessor's parcel number cross reference system and exchanging development activity data. The Red Bluff Land Use Element was developed with similar goals as Tehama County's Land Use Element for community growth and annexation.

Policy 10

Encourage the local building industry to present written and oral input to local government as to measures which may be taken to meet the housing needs of the local population.

Evaluation

The City of Red Bluff encourages participation by local citizens in planning for local housing needs. Public Hearings are held for the submission of Grant Applications, Code Adoption, Regulation Adoption, and for most project approval. The public hearings are noticed in the local paper and posted in the City Hall.

Policy 11

Establish an Equal Opportunity Housing Program in the City to promote housing opportunities and provide information and referrals regarding fair housing.

Evaluation

The City maintains a public information file on Fair Housing which provides the public with a referral service and literature on fair housing.

Policy 12

Encourage and assist where possible, the providers of emergency shelter to meet the needs of persons and families who are homeless.

Evaluation

The Victory House, located in Red Bluff, provides emergency shelter for families and persons who are homeless.

VII. CONSTRAINTS TO DEVELOPMENT OF HOUSING

State law requires the City to identify those governmental and nongovernmental factors that inhibit the development, maintenance, or improvement of housing. These constraints are discussed in this section.

GOVERNMENTAL CONSTRAINTS

Governmental regulation protects the health, safety and welfare of the community by controlling the use of land and standards of development. These regulations can sometimes increase the cost of development or constrain the development of sufficient housing to meet expected needs.

Land Use Controls

Land use controls can affect the cost of housing if they artificially limit the supply of land available for development and/or limit the type of housing that can be built in a city to certain types which are less affordable. The General Plan and zoning ordinance, which implements the General Plan, are the tools used by cities to guide the development of land. The City has also adopted a set of "Land Division Standards" which governs construction work in the City of Red Bluff. Red Bluff's development processing requirements represents minimum standards mandated by the State and impose no extraordinary requirements or procedures (see Appendix G). The City Council could grant an exception to this rule.

Residential land use categories and their consistent zoning designations are described in the Land Use Element including Residential Suburban (R-3), zoning R-1 (One Acre Per Dwelling Unit; Residential Low-Density (R-L), zoning R-1, or R-2 (one to 10 Dwelling Units Per Acre); Residential Medium Density (10.1 to 20 Dwelling Units Per Acre).

The Planning Commission may allocate "density bonuses" for the development of affordable housing. These bonuses are specified in Chapter 4.3 of State Planning, Zoning and Development Law beginning with Section 65915 of the California Government Code. (State Density Bonus Law, 1990). Density bonuses can be used to off-set standards that may reduce residential density potential on a development site.

The City places no restrictions on mobile or factory built home other than those placed on conventional housing. The zoning regulations used by the city are typical to those found in cities throughout the state. As stated previously in Section IIIf, these standards can impact the overall density potential, which in turn can increase the cost per unit. However, the city provides several options, such as PUD's and Density Bonus Law that can be used to dramatically increase the density potential and therefore reduce the cost per dwelling unit. Zoning controls therefore, are not a constraint to development of affordable housing in Red Bluff (see Appendix H).

Building Codes

Building standards are essential to ensure safe housing. The City of Red Bluff has adopted the Model Codes consisting of the Uniform Building Code, Uniform Housing Code, Uniform Fire Code, Uniform Mechanical Code, Uniform Plumbing Code and the National Electric Code, with local amendments based on local conditions, as provided by law. There is no ongoing systematic enforcement of the Uniform Housing Code in Red Bluff. Existing units are inspected only when complaints are received by the City, or when an owner seeks a permit for additional construction.

Additional design requirements or improved safety standards may have a small impact on the cost of housing. The Red Bluff City Code amends the Uniform Fire Code to require fire sprinklers on buildings over three (3) stories in height or eight thousand square feet in area of all floors. The City's requirements for fire sprinklers may increase the long-term safety of residents, reduce property damage in the event of fire and prevent fire spreading to adjoining homes.

Permits and Fees

The City of Red Bluff charges fees in order to pay the costs to process, regulate and mitigate the impacts of new development. Fees are also established to connect to the sewer and water system. If fees are inordinately high or above those charged by other communities, they can lead to higher cost housing or discourage housing development. However, the City of Red Bluff's fees are in line with and less than the majority of those found in other communities in the North Valley. Based upon the August, 1991 fee schedule, total fees, including planning, building, public works, school impact fees, fire and sanitary district hook ups averages \$5,418 per single family detached home (see Appendix F).

Site Improvements

Development standards such as parking requirements, street widths, provision of curbs and sidewalks and other site improvement requirements can also increase the cost of developing housing. Inordinately high standards can discourage housing development in the community. Red Bluff's standards are similar to those found in most other communities in the North Valley.

Infrastructure and Utilities

Discussions with the City's Engineer indicate there is adequate service capacity to accommodate growth forecast over the next five-year period. However, a continuation of the current (1986 - 91) severe drought conditions may require some near-term measures to limit the increased water demand resulting from new development. The Red Bluff Public Works Department indicated the sewage treatment plant expansion is planned to be on-line by 1994. Unanticipated delays in developing the plant could lead to insufficient capacity at some point in the future, but no problems are foreseen in the next five years.

Water Supply

Water is from groundwater sources and is supplied to the distribution system by twelve wells of varying hydraulic capacity. The distribution system includes about 53 miles of distribution mains. Anticipated population growth beyond the current 12,500 served by infrastructure creates a need for additional capacity of the current water system. New development is subject to payment of impact fees that will be used to provide new wells to supplement the public water system.

Wastewater Collection System

The wastewater collection sewer system conveys all wastewater generated within the City boundary to the treatment plant operated by the City. Approximately 2,500 units can be added to the City's wastewater collection system.

Federal and State Actions

Various State and Federal policies can have significant impacts on the affordability of housing. Most important of these policies are those Federal monetary policies which influence interest rates. Interest rates affect both construction costs (construction loans) and long-term mortgage costs, thereby having a significant direct impact on the affordability of housing (California Statewide Housing Plan Update, 1990, 24). Although interest rates are below the 13-14 percent range of the early 1980s, they are not expected to return to the 5-6 percent range of the 1950s and 1960s.

Changes in both State and Federal policy have severely limited the availability of low interest rate loans, and of tax credits for rental housing development. The Federal government has also significantly reduced its involvement in direct subsidy and construction programs to meet the housing needs of low and very low income households.

Article 34

Article 34 of the California State Constitution requires state public bodies to obtain voter approval before they "develop, construct or acquire low income rental units" (California Department of Housing and Community Development, 1980). This legislation can provide a constraint to the development of affordable housing unless the community submits a referendum to the voters allowing the development of affordable units. The other approach would be to structure the financing of affordable units so as to not to require Article 34 referendum.

NONGOVERNMENTAL CONSTRAINTS

Land Availability

Red Bluff has an abundant supply of vacant residential land available for development. A land inventory was completed for the update of the Land Use Element in 1991. The complete inventory of vacant residential land is detailed in Table 14. Total Acreage in the City of Red Bluff is 4,815 acres. This land inventory reveals that there are 815.23 acres vacant and zoned for residential use within the City of Red Bluff. A total of 75 parcels were identified.

The recent level inventory reveals that Low Density Residential categories (R-1, R-2) include 627.75 acres, medium density residential (R-3) include 20.16 acres, and high density residential include 167.32 acres.

Most sites are adequately served by public facilities necessary to accommodate new residential use. Availability of sewer and water on some vacant sites is a problem.

Construction Costs

Discussions with new residential developers indicate a typical construction cost of about \$50 per square foot, resulting in \$42,500 in "hard costs" for an 850 square foot apartment or condominium, a very small unit by today's standards. Assuming improved land cost of \$50,000 per lot, the finished unit would cost a minimum of \$92,500, without accounting for profit or the cost of construction financing. Assuming the unit sold for \$100,000, debt service on this amount would require rent payments of \$850 per month (excluding other housing costs). If a homebuyer made a down payment of 10 percent, a mortgage of \$90,000 would be required. Debt service on this amount (assuming a 30 year mortgage at 10 percent interest) would average about \$790 per month. Comparing these figures to Red Bluff's current income profile, the average household in the would not even be able to afford this small new unit.

Availability of Financing

In the wake of the savings and loan crisis, credit has been less available and more difficult to qualify for than in the 1980s. This current phenomenon is not particular to Red Bluff, nor does the City have the capacity to improve the lending environment. Currently interest rates are at their lowest levels in 15 years (California Statewide Housing Plan Update, 1990, 24). This has stimulated the housing market. The availability of financing is not considered a constraint unique to Red Bluff.

Environmental Constraints

As noted under land availability, much of the remaining land available for development faces some type of environmental constraint. These constraints include flood plains, wetlands (including riparian corridors), steep slopes and proximity to agricultural uses. Each of these constraints is described below.

Flooding has been a problem in Red Bluff since it was established on the banks of the Sacramento River. Development within the Sacramento River watershed has

increased the magnitude, frequency and amount of damage from flooding. Flood hazards and the related flood plain management regulations have thwarted the City's efforts to provide higher density housing around the Sacramento River. An ongoing planning process led by the U.S. Army Corps of Engineers is seeking to identify a means to solve or at least mitigate the flooding problem. Also, good judgment dictates that development should not encroach into flood plains and floodways of the several creeks that meander through the City.

Red Bluff's wetlands are generally located in the southern portion of the City. The exact location, extent and type of wetlands are subject to the interpretation of a number of agencies. Wetland protection is gaining increased attention, as the public becomes more aware of wetlands' critical habitat value and the threats to their survival. Protection of the wetlands along the river and along creek corridors with riparian (i.e., wetlands) vegetation is City policy.

As flatlands are built-out, an increasing amount of development is occurring on the hillsides which flank the City. Necessary mitigation of geologic hazards and slopes tends to result in increased construction costs. A geo-technical report is often required in conjunction with the development of properties in and around the local earthquake faults.

Protection of valuable agricultural land from encroachment by incompatible urban residential uses is also an important environmental constraint in an agricultural county like Tehama. Residential uses are affected by standard agricultural practices such as dust and the use of chemicals. The City, in their recent Master Study, has directed growth toward the west, away from agricultural areas.

VIII. HOUSING GOALS, POLICIES AND PROGRAMS

INTRODUCTION

Housing goals, policies and programs presented in this section describe the City's commitment to meeting housing needs for City of Red Bluff residents. The city of Red Bluff is a non-entitlement city. Therefore applications are required to attain any funds for housing programs. The city does not have its own housing authority or administrator. Local non-profit organizations such as CHIP apply for and administer housing funds for the city. As required by State law, this section provides the following information to describe a program and how and when it will be implemented:

1. Brief statement of program, including specific City actions which will be taken to implement program.
2. City department or agency responsible for implementation. It should be noted that the City Department or agency listed is expected to take some lead role towards implementing the program based on direction from the City Council. Ultimate responsibility for approving and directing all City implementation measures rests with the City Council.
3. Financing or funding source. The availability of funding resources is often beyond the control of the City. If resources prove not to be available, implementation of some programs and achievement of objectives will not be feasible.
4. Quantified objectives. State law requires Housing Elements to include quantified objectives, where appropriate. While the City will strive to meet the objectives identified in this Element, achieving them is often dependent on resources which are outside the control of the City. The City will do all it can to seek necessary resources. The following chart represents the city's overall objective based on income categories:

<u>Quantified Objective</u>	<u>New Construction*</u>	<u>Rehab**</u>	<u>Conservation***</u>
Very Low-income	186	15	94
Low-Income	113	15	--
Moderate-Income	140	30	--
Above Moderate	226	50	--

* Tri-County Allocation

** Program 3.1. Moderate and Above Moderate income numbers are conservative estimates based on the Housing Condition Survey and since government assistance programs are less available for these income groups (see page 21 for rehab data).

*** Based on the 94 government assistance units that are expiring.

5. **Schedule for completion.** The schedule for completion, like the quantified objectives and financing, is often dependent on factors outside the City's control. The schedule indicates the City's best estimate based on assumptions regarding resources.

The goals, policies, and programs address affordability of units, energy conservation, condition of units, quantity of supply and access to housing opportunities. At the end of this section there is a program/policy matrix which cross-references identified needs and constraints with programs (see Figure 3).

HOUSING DEVELOPMENT

The following section describes the City's strategy for meeting the housing development needs of its existing and future residents. There are many factors outside the City's control which constrain the development of housing especially housing affordable to low and very low income households, as discussed in the "Constraints" section. This section describes the City's policies for addressing those constraints in order to promote development of sufficient housing to meet the needs of all Red Bluff residents.

Because State and Federal subsidies available to assist households are very limited, efforts to meet the needs of low and very low income households will often involve local programs and the use of highly constrained local sources of funding. The City does not generally build housing itself but relies on the private market to meet housing needs. Many programs therefore focus on providing incentives and inducements to the private home building industry to meet housing needs.

Goals for the Development of Housing

- Provide a sufficient number of affordable housing units to meet the needs of current Red Bluff residents and provide a fair share of the market area housing needs. Attempt to achieve TCAPC housing needs figures for the 1991-1997 period: 186 very-low units, 113 low-income units, 140 moderate-income units, 226 above-moderate-income units.
- Provide a variety of housing types by tenure and price in all residential areas, compatible with the character of the area.

Policies for the Development of Housing

1. Continue to maintain a sufficient supply of land designated for residential development to meet the quantified housing need of 665 units for the 1991 to 1997 period.
2. Seek to maintain a sufficient supply of land for medium and higher density housing, consistent with preservation of neighborhood character, environmental constraints, and other goals of this General Plan.

3. Recognize Red Bluff housing needs (i.e., population growth needs, employment needs and regional housing needs) when considering non-residential development proposals.
4. Use the architectural review process to insure higher density infill housing developments are sensitive to the character and appearance of their surroundings.
5. Use the Planned Development regulations to refine land use policies and promote design flexibility for residential developments, particularly for those located in unique settings.
6. Support plans and programs for well-designed lower-income housing developments located in areas appropriate to the needs and desires of the constituent population and convenient to public transportation, shopping, recreation and other community facilities.
7. Make maximum use of public and private resources to help meet identified housing needs.
8. Promote the use of density bonuses to meet identified housing needs.
9. To the degree feasible, balance employment opportunities with the provision of housing and promote housing types which meet the needs of the work force in Red Bluff.
10. Allow for an increase in the supply of housing by permitting residential development in commercial areas as a mixed use and as a separate use when the design and location are appropriate.
11. Support the provision of child care facilities for working parents. Safe, economical child care indirectly helps low- and moderate-income parents afford housing.
12. Support the provision of residential care facilities for the developmentally disabled, mentally disordered or physically disabled by permitting such facilities to be located in residential areas by use permit. The following facilities are allowed on these zoning designations with use permits: Rest Home (R-4) and Convalescent Hospital (C-1 or P-D).
13. The City will establish a mechanism to ensure the disbursement of a portion of the Community Development Block Grant funds, complements the goals, policies, and programs of the Housing Element.

Programs for the Development of Housing

- | | | |
|-----|---------------------------|---|
| 1.1 | <u>Program Statement:</u> | Monitor the supply of vacant land within City limits through the use of the Land Use/Vacant Land Inventory Program. |
| | Responsible Agency: | Community Development Department |

Financing:	Staff time
Objectives:	Conduct an annual review and prepare a report
Time Frame:	Ongoing
1.2 <u>Program Statement:</u>	Utilize State and Federal assistance to the fullest extent possible to develop affordable lower-income housing for families, including farmworkers.
Responsible Agency:	Community Development Department and Developer
Financing:	Federal, State programs, Staff time
Objectives:	RCHP application for Mercy Housing site (50 units of low-income family housing) with project completion anticipated in 1993/1994. Begin planning and application process for development of two additional sites in 1994. 50 additional units for low and very low income families.
Time Frame:	Ongoing
1.3 <u>Program Statement:</u>	Assist in identifying location of sites for possible acquisition by an affordable housing developer for assisted housing for large families and/or sites which could be considered for dormitory-style housing for migrant workers.
Responsible Agency:	Community Development Department,
Financing:	City funding for staff time
Objectives:	Identify sites for active efforts towards acquisition
Time Frame:	Create an inventory of sites potentially available by 1995. Actively work (and/or work with developers) to acquire sites through 1997. Periodically update inventory. 50 units for low and very low income families by 1997.
1.4 <u>Program Statement:</u>	Assist in the development of affordable housing by continuing to promote self-help housing development within the City. Self-help housing is FMHA funded housing where the future owner/resident provides labor towards the development of the unit and/or assists in sharing the cost of building the units.
Responsible Agency:	Community Development Department

Financing:	Possible sources of funding include: State Pre-Development loans, and available State or Federal funding sources.
Objectives:	20 units of affordable low- or moderate-income ownership housing
Time Frame:	1992-1997
1.5 <u>Program Statement:</u>	Assist private sector with developing an outreach program aimed at increasing the supply of privately produced rental and ownership housing in a manner which may be more affordable to the end consumer. The program will include disbursement of information through brochures, advertising, workshops to affordable housing developers, appropriate agencies, and other interested parties. Information to be disbursed will relate to: state and federal housing finance/funding programs; Housing Element programs; existing zoning ordinance incentives for affordable housing, including density bonuses, second units, reduced single-family lot sizes, reduced parking for elderly, reduced fees and setbacks on sites or areas of the city considered ideal for high-density housing.
Responsible Agency:	Community Development Department
Financing:	Staff time
Time Frame:	Establish and implement program in 1994-1995
1.6 <u>Program Statement:</u>	Promote a program permitting an increase in density (a "density bonus") of a maximum of 25 percent above the maximum permitted density under the applicable zoning district, as an incentive to a housing development in which at least: <ul style="list-style-type: none"> a) 20 percent of the units are reserved for low and very low income households; or b) 10 percent of the units are reserved for very low income households; or c) 50 percent of the units are for senior citizens (over age 62).
Responsible Agency:	Community Development Department and City Attorney
Financing:	Staff time
Objectives:	Potentially increase the supply of housing for low and very low income households

- Time Frame: Modify the existing density bonus ordinance by December, 1993
- 1.7 Program Statement: Encourage developers to apply for State low-interest rate bonds to be used for the development of housing affordable to low and moderate income households, when funds are available.
- Responsible Agency: City Attorney
Financing: Staff time and State Bond Issue
Objectives: Apply for allocation and bond issues
Time Frame: Continuous
- 1.8 Program Statement: Continue to utilize to the fullest extent possible, available Federal subsidies to residents through the Section 8 or subsequent rental assistance program. Tehama County Housing Authority will provide information to residents on the use of any new housing assistance programs which become available.
- Responsible Agency: Tehama County Housing Authority
Financing: Section 8 Existing, State programs (Housing Assistance Program)
Objectives: Based on funding availability
Time Frame: Ongoing
- 1.9 Program Statement: Continue to support the emergency housing program operated by Tehama County which provides emergency shelter for battered women and their children, and support the provision of transitional housing.
- Responsible Agency: Community Development Department
Financing: CDBG and other City, State and Federal funds
Objectives: Maintain existing shelters (ESP, FEMA monies)
Time Frame: Ongoing
- 1.10 Program Statement: Revise "second unit" policy to promote the development of second units per Government Code Section 65852.1 and 65852.2 (Second Units, 1990).
- Responsible Agency: Community Development Department
Financing: Staff Time
Time Frame: Revision by the end of 1993

1.11 Program Statement:

Work in close cooperation with Tehama County to insure: the orderly development of unincorporated lands adjacent to the City and; the consistency of land use policies and development standards in those areas.

Responsible Agency:

Building Department/Planning Department

Financing:

Staff Time

Time Frame:

Ongoing

ENERGY CONSERVATION

Increases in the price of energy affect the costs of providing comfortable shelter. Increased energy efficiency can assist in reducing the cost of shelter. Provision of housing in proximity to jobs reduces the need for the use of energy, thereby reducing the overall cost of living.

The Energy Conservation section of the Conservation Element of this General Plan discusses current State law regarding passive and natural heating and cooling systems in subdivisions, solar shade control, as well as Title 24 energy standards for residential buildings. Energy policies support alternative and efficient transportation systems, reduction of energy consumption in buildings through design and proper landscaping, and implementation of other energy conservation techniques.

Energy conservation measures requiring substantial improvements can result in increasing the initial cost of the unit. Programs now in effect to minimize the cost of energy conservation include Federal and State tax credits for installation of solar heaters and insulation. Loans are available to low-income families through the Pacific Gas and Electric's Weatherization Program.

Goal for Energy Conservation

Ensure increased energy self-sufficiency through use of energy conservation measures in all homes, including low- and moderate-income housing.

Policies for Energy Conservation

1. Promote the use of energy conservation measures in the development of all housing, but especially in housing for low- and moderate-income housing.
2. Promote opportunities for use of solar energy by encouraging solar access on all properties to be developed in the future.

Programs for Energy Conservation

- | | | |
|-----|---------------------------|--|
| 2.1 | <u>Program Statement:</u> | Promote and encourage the "weatherization" program operated by SHHIP and funded by Pacific Gas & Electric. |
| | Responsible Agency: | S.H.H.I.P. |
| | Financing: | Pacific Gas & Electric, State of California, D.O.E. |
| | Objectives: | 100-150 homes |
| | Time Frame: | Ongoing |
| 2.2 | <u>Program Statement:</u> | Encourage use of solar energy considerations in new residential construction. |
| | Responsible Agency: | Community Development Department |

Financing:
Objectives:
Time Frame:

Staff time
Ongoing
Ongoing

2.3 Program Statement

Promote and encourage tree planting to provide shade cooling in summer and the use of ground cover in new developments in lieu of concrete rock, or asphalt.

Responsible Agency:
Financing:
Objectives:
Time Frame:

Community Development Department
Staff Time
Ongoing
Ongoing

MAINTENANCE AND IMPROVEMENT OF EXISTING HOUSING

State Housing law requires Housing Elements to establish programs for the "Improvement of housing".

The major source of new housing for future residents and especially low and moderate income residents is turnover in the existing housing stock. Maintenance of that stock is therefore not only important to the character and quality of each neighborhood and the City as a whole, but is also an important strategy for retaining a sufficient supply of good quality housing for low and moderate income households. Programs which assist qualified property owners to maintain property or rehabilitate dilapidated property is a relatively low cost means to maintain and expand the stock of relatively affordable housing.

The City currently operates a CDBG housing rehabilitation program designed to maintain and improve the existing housing stock in Red Bluff. These activities include: public outreach to encourage energy conservation in existing dwellings; follow-up for any housing discrimination complaints. In the following section, the City proposes to continue most past activities and has included additional detail on the implementation measures to achieve the goal of maintaining and improving existing housing.

Goal for the Improvement and Maintenance of Housing

Ensure that the quality, safety, affordability, and livability of the housing stock in the City of Red Bluff is continually maintained or upgraded, and that dilapidated housing which cannot be improved is replaced.

Policies for the Improvement and Maintenance of Housing

1. Continue to utilize available Federal and State housing subsidies to the fullest extent possible to assist low and moderate income households and owners of

housing available to low and moderate income tenants to maintain and rehabilitate homes and apartments.

2. Continue to enforce the Housing and Fire Prevention Codes, and the Health and Safety Regulations.

Programs for the Improvement and Maintenance of Housing

- | | | |
|-----|---|--|
| 3.1 | <u>Program Statement:</u> | Continue the rehabilitation of substandard residential units using available subsidies for lower-income residents (both owner and rentals units). |
| | Responsible Agency:
Financing: | Community Development Department
Community Development Block Grant,
CHRP-O, or any suitable State, Federal or
privately-funded program. |
| | Objectives:
Time Frame: | 30 rehabs
1992-1997 |
| 3.2 | <u>Program Statement:</u> | Continue code enforcement of the Housing and Fire Prevention Codes and Health and Safety Regulations by appropriate City departments. |
| | Responsible Agency:
Financing:
Time Frame: | Building Department, Fire Department
City funds
Ongoing |
| 3.3 | <u>Program Statement:</u> | Continue to make information available to residents regarding home rehabilitation programs. Increase public awareness of self-help and rehabilitation programs through an outreach program which could include distribution of brochures and canvassing of target neighborhoods. |
| | Responsible Agency:
Financing:
Objectives:
Time Frame: | CHIP, Building Department
CDBG
Enhance existing marketing program
Program in place by 1994 |
| 3.4 | <u>Program Statement:</u> | Ensure the maintenance of residential areas by monitoring and periodically reviewing the City's capital improvement programs affecting Red Bluff's neighborhoods. |
| | Responsible Agency: | City Manager, Public Works and Planning
Departments |

Objectives:

Improvements of neighborhood quality
through specific improvements as outlined in
capital improvement programs

Time Frame:

Periodically

RETENTION OF EXISTING AFFORDABLE HOUSING

It is generally much less expensive to conserve and retain existing affordable housing stock than to build new housing and seek to make it affordable to low and very low income residents. Existing affordable housing can be lost in many ways, including: lack of maintenance, conversion from rental housing to ownership (e.g., condominium conversion), by conversion from residential use to commercial uses, and by "upgrading" an existing affordable unit to the degree that it is no longer affordable. The loss of existing affordable housing can be mitigated to some degree through City actions. For example, the City already has a condominium conversion ordinance and programs to reduce the costs of maintenance to qualified households. While "upgrading" an existing unit is often desirable, there are means available to ensure that some smaller, more affordable units are conserved.

As discussed in the section on termination of federal subsidies, the City has 94 units of affordable housing which could be lost from the stock of below-market housing in the next five years if the owner opts out of federal subsidy programs. This is a relatively new issue that is addressed for the first time in this Element.

Goal for Retention of Existing Affordable Housing

Retain and conserve the existing supply of high quality housing affordable to low and moderate income households.

Policies for Retention of Existing Affordable Housing

1. Support mixture of residential and commercial uses in such a way that existing residences can be retained where they are compatible in downtown area.
2. Continue to regulate conversions of rental developments to condominium ownership to conserve the supply of rental housing.
3. Strongly encourage the retention of existing Federally subsidized affordable housing, and intervene when necessary and feasible, to preserve such housing.

Programs for Retention of Existing Affordable Housing

- 4.1 Program Statement: Deny condominium conversion of rental units when the City-wide vacancy factor is found to be less than three percent, defined, as a "severe housing shortage." If the vacancy factor is more than three percent the City may allow conversion of one-half the total number of rental units built that year to condominium units.

Responsible Agency: Community Development Department, City Attorney

- 4.2 Program Statement: Encourage private sector to monitor the continuing affordability of units developed with a density bonus or through a special Residential policy by verifying that developers have adhered to the required deed restrictions and developer agreements which govern the affordability of such units. The City Community Development Department should create and maintain a summary of units restricted under the City's development agreements.

Responsible Agency: Community Development Department
Financing: Staff time
Objectives: Monitor units developed through the Special Residential and density bonus program
Time Frame: Create list of units by 1994; monitoring is an ongoing activity.

- 4.3 Program Statement Provide and maintain a monitoring system with the local non-profit housing development organizations to preserve assisted housing units that are eligible to be converted to market rate units in response to the expiration of assisted housing regulatory agreements with state housing regulatory agreements with state of federal housing agencies.

Responsible Agency: Community Development Department
Financing: HOME, CDBG
Objectives: 94 units
Time Frame: 1992-1997

EQUAL OPPORTUNITY

Goal for Equal Opportunity in Housing

Ensure that housing programs maximize choice, avoid economic segregation, and avoid discrimination based on age, sex, race and ethnic background.

Policies for Equal Opportunity in Housing

Promote equal opportunity in housing assessing non-discrimination in all City housing programs.

Programs for Equal Opportunity in Housing

- 5.1 Program Statement: The City will establish an Equal Housing Opportunity Program. This program will disperse information on fair housing laws, refers tenant complaints on discrimination and acts as tenant advocacy organization. The city will continue to post regulations pertaining to equal housing opportunities at the front counter of city offices and will provide the library with copies of regulations.
- | | |
|---------------------|---|
| Responsible Agency: | Community Development Department and Consultant |
| Financing: | CDBG, Program Income |
| Objectives: | Ongoing |
| Time Frame: | Continuous |

REVIEW AND UPDATE

Goal for the Review and Update of the Housing Element

Ensure that the goals, implementation measures and specific housing programs in this document are pursued within the establishment time frame, and continue to be compatible with other elements of the General Plan.

Policies for the Review and Update of the Housing Element

1. The City Planning Commission shall review the effectiveness of the housing element's policies and programs every year following the adoption of the 1992 Housing Element Update.
2. As required by State law, complete a comprehensive review and update of the Housing Element including a reassessment of goals, implementation measures, priorities and programs in 1997.

FIGURE 3 CITY OF RED BLUFF PROGRAMS/NEEDS MATRIX

Figure 3

Program/Needs Matrix

NEEDS/ CONSTRAINTS	HOUSING ELEMENT PROGRAMS																					
	HOUSING DEVELOPMENT									ENERGY CONSERVATION			HOUSING REHAB				HOUS. RETEN.		EQUAL OP.			
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	1.11	2.1	2.2	2.3	3.1	3.2	3.3	3.4	3.5	4.1	4.2	5.1
Affordable housing needs																						
Rental - Occupied Housing		✓	✓		✓	✓	✓	✓		✓										✓	✓	✓
Owner - Occupied Housing				✓	✓							✓	✓	✓								✓
Housing Rehabilitation															✓	✓	✓	✓	✓			✓
Elderly Housing		✓			✓	✓	✓	✓		✓										✓	✓	✓
Homeless					✓				✓													✓
Physically Disabled		✓			✓		✓	✓														✓
Female - Headed		✓		✓	✓	✓	✓	✓												✓	✓	✓
Large Families		✓	✓	✓	✓	✓	✓	✓												✓	✓	✓
Mentally Ill								✓														✓
Farmworker Housing		✓	✓	✓	✓	✓	✓	✓														✓
Termination of Subsidies																				✓	✓	
Constraints to Development																						
Land Use	✓										✓											
Permit Process											✓											
Land Availability	✓																					
Construction Costs											✓											
Environmental Constraints											✓											

APPENDIX A

GLOSSARY OF TERMS

"Accessible Housing": Units that are accessible and adaptable to the needs of the physically disabled.

"Affordable Housing": The generally accepted measure of affordable housing means spending no more than 25-33% of one's gross income on housing costs. For example, a beginning school teacher earning \$20,000 per year can afford to pay up to \$550 per month (at 33%) for housing. A beginning fire fighter earning \$30,000 per year can afford up to \$832 per month (at 33%).

"Affordable Units": All dwelling units made available at prices or rents below market-rate. Affordable units include units affordable to households with very low-income, low-income, and moderate-income.

"Employed Resident": A worker who lives in a given location but could work anywhere.

"Employee": Someone who works at a given location. Workers with routes (travelling salesperson, etc.) are considered employees at the place where they are dispatched from.

"Family": A group of people related by blood and marriage. Not to be confused with "household".

"Household": One or more persons who share a dwelling unit. Not to be confused with "family".

"Housing Need": A local share of the regional housing units assumed by H.C.D. to be "needed". Housing need is distinguished from housing demand, which is sensitive to the marketplace. Housing projections represent probable (rather than desired) levels of housing activity in each jurisdiction of the area.

"Housing Units": The official nomenclature of the U.S. Census. A housing unit must be a separate entrance from other housing units but need not have separate kitchen facilities.

"Infrastructure": The grid of public capital improvements (roads, water and sewer) that is necessary to make urban development (including housing) occur. Essential infrastructure is that infrastructure which must be in place for the house to be habitable.

"Low-Income Households": Households earning 50-80% of the median household income.

"Market-Rate Units": Market-rate units are those dwelling units available at prices or rents at or above market-rate, which are those prices or rents determined by the marketplace. When market prices or rents are bid up, many households are unable to compete for housing in the market place.

"Median Household Income": The middle point at which half of the City's households earn more and half earn less.

"Moderate Income Household": Households earning 80-120% of the median household income.

"Persons per Household (PPH)": The statistical average number of persons in a household.

"Second Unit": A separate dwelling unit that is either attached to another dwelling unit or completely detached from another dwelling unit.

"Very Low Income Households": Households earning less than 50% of the median household income.

"Unit": A basic way of counting homes. The number of units is the number of homes.

APPENDIX B

DRAFT

REGIONAL HOUSING NEEDS PLAN
FOR
TRI-COUNTY AREA PLANNING COUNCIL

January 1991 to July 1997

ADOPTED:____(date)_____

EFFECTIVE DATE:____(date)_____

A 90-day period for local governments to propose revisions began on
____(date)_____ and expired on ____ (date)_____.

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COUNTY OF RED BLUFF

TABLE 1

TRI-COUNTY AREA PLANNING COUNCIL

HOUSEHOLD PROJECTIONS BY INCOME GROUP
JANUARY 1, 1991 TO JULY 1, 1997

<u>Jurisdiction and Income Group</u>	<u>January 1, 1991 Number (%)</u>	<u>July 1, 1997 Number (%)</u>	<u>Jan. 1991 to July 1997 Number (%)</u>
COLUSA COUNTY			
Colusa			
Very Low	456 (25.0)	511 (25.0)	55 (25.1)
Other Lower	329 (18.0)	368 (18.0)	39 (17.8)
Moderate	365 (20.0)	409 (20.0)	44 (20.1)
Above Moderate	676 (37.0)	757 (37.0)	81 (37.0)
Total	1,826 (100.0)	2,045 (100.0)	219 (100.0)
Williams			
Very Low	175 (24.0)	210 (24.0)	35 (24.0)
Other Lower	167 (23.0)	201 (23.0)	34 (23.3)
Moderate	131 (18.0)	157 (18.0)	26 (17.8)
Above Moderate	255 (35.0)	306 (35.0)	51 (34.9)
Total	728 (100.0)	874 (100.0)	146 (100.0)
Unincorporated			
Very Low	673 (21.6)	751 (21.6)	78 (21.4)
Other Lower	582 (18.7)	647 (18.6)	65 (17.9)
Moderate	638 (20.5)	714 (20.5)	76 (20.9)
Above Moderate	1,224 (39.2)	1,369 (39.3)	145 (39.8)
Total	3,117 (100.0)	3,481 (100.0)	364 (100.0)
Colusa County Total			
Very Low	1,304 (23.0)	1,472 (23.0)	168 (23.0)
Other Lower	1,078 (19.0)	1,216 (19.0)	138 (19.0)
Moderate	1,134 (20.0)	1,280 (20.0)	146 (20.0)
Above Moderate	2,155 (38.0)	2,432 (38.0)	277 (38.0)
Total	5,671 (100.0)	6,400 (100.0)	729 (100.0)

TABLE 1 (Continued)

TRI-COUNTY AREA PLANNING COUNCIL

HOUSEHOLD PROJECTIONS BY INCOME GROUP
JANUARY 1, 1991 TO JULY 1, 1997

<u>Jurisdiction and Income Group</u>	<u>January 1, 1991</u> <u>Number</u> <u>(%)</u>	<u>July 1, 1997</u> <u>Number</u> <u>(%)</u>	<u>Jan. 1991 to July 1997</u> <u>Number</u> <u>(%)</u>
TEHAMA COUNTY			
Corning			
Very Low	777 (34.0)	862 (34.0)	85 (34.0)
Other Lower	457 (20.0)	507 (20.0)	50 (20.0)
Moderate	457 (20.0)	507 (20.0)	50 (20.0)
Above Moderate	595 (26.0)	660 (26.0)	65 (26.0)
Total	2,286 (100.0)	2,536 (100.0)	250 (100.0)
Red Bluff			
Very Low	1,367 (28.0)	1,553 (28.0)	186 (21.0)
Other Lower	830 (17.0)	943 (17.0)	113 (17.0)
Moderate	1,025 (21.0)	1,165 (21.0)	140 (21.0)
Above Moderate	1,659 (34.0)	1,885 (34.0)	226 (34.0)
Total	4,881 (100.0)	5,546 (100.0)	665 (100.0)
Tehama			
Very Low	61 (37.0)	65 (36.1)	4 (26.7)
Other Lower	41 (25.0)	44 (24.4)	3 (20.0)
Moderate	27 (16.0)	30 (16.7)	3 (20.0)
Above Moderate	36 (22.0)	41 (22.8)	5 (33.3)
Total	165 (100.0)	180 (100.0)	28 (100.0)
Unincorporated			
Very Low	3,151 (26.7)	3,652 (26.8)	501 (27.2)
Other Lower	2,115 (17.9)	2,448 (18.0)	333 (18.1)
Moderate	2,316 (19.7)	2,678 (19.6)	362 (19.6)
Above Moderate	4,213 (35.7)	4,860 (35.6)	647 (35.1)
Total	11,795 (100.0)	13,638 (100.0)	1,843 (100.0)

TABLE 2
TRI-COUNTY AREA PLANNING COUNCIL
BASIC CONSTRUCTION NEEDS
JANUARY 1, 1991 TO JULY 1, 1997

COLUSA COUNTY:

BY COMPONENTS*:

	Housing Units			
	<u>Colusa</u>	<u>Williams</u>	<u>Unincorporated</u>	<u>County Total</u>
Household Increase	219	146	364	729
1991 Vacancy Need	23	- 3	51	71
1997 Vacancy Need	14	12	69	95
Replacement Need 1990-1997	31	11	51	93
Total	287	166	535	988

BY INCOME GROUP:

	<u>Colusa</u>	<u>Williams</u>	<u>Unincorporated</u>	<u>County Total</u>
Very Low	72	40	114	226
Other Lower	51	39	96	186
Moderate	58	29	112	199
Above Moderate	106	58	213	377
Total	287	166	535	988

*Basic Construction Needs were calculated using the formulas shown in the Appendix. The following were used in the calculations: for Colusa: a homeownership percentage of 60.3, a vacant-not-for-sale-or-rent percentage of 2.5, and an annual removal rate of .002; for Williams: a homeownership percentage of 60.7, a vacant-not-for-sale-or-rent percentage of 3.9, and an annual removal rate of .002; and for the Unincorporated Area: a homeownership percentage of 66.0, a vacant-not-for-sale-or-rent percentage of 12.9, and an annual removal rate of .002.

TABLE 2 (Continued)

TRI-COUNTY AREA PLANNING COUNCIL

BASIC CONSTRUCTION NEEDS
JANUARY 1, 1991 TO JULY 1, 1997GLENN COUNTY:

BY COMPONENTS*:

	<u>Housing Units</u>			
	<u>Orland</u>	<u>Willows</u>	<u>Unincorporated</u>	<u>County Total</u>
Household Increase	292	261	452	1,005
1991 Vacancy Need	51	43	101	195
1997 Vacancy Need	20	18	38	76
Replacement Need 1990-1997	33	31	70	134
Total	396	353	661	1,410

BY INCOME GROUP:

	<u>Orland</u>	<u>Willows</u>	<u>Unincorporated</u>	<u>County Total</u>
Very Low	103	81	139	323
Other Lower	70	61	108	239
Moderate	87	70	139	296
Above Moderate	136	141	275	552
Total	396	353	661	1,410

*Basic Construction Needs were calculated using the formulas shown in the Appendix. The following were used in the calculations: for Orland: a homeownership percentage of 59.8, a vacant-not-for-sale-or-rent percentage of 2.9, and an annual removal rate of .002; for Willows: a homeownership percentage of 51.8, a vacant-not-for-sale-or-rent percentage of 2.5, and an annual removal rate of .002; and for the Unincorporated Area: a homeownership percentage of 67.1, a vacant-not-for-sale-or-rent percentage of 4.6, and an annual removal rate of .002.

there was a surplus of vacant units in those jurisdictions compared to the minimum desirable vacancy level needed for the healthy functioning of the housing market. The other jurisdictions all have a positive "1991 vacancy" need, which means that there was a shortage of units there on January 1, 1991.

Tables 1 and 2 also both contain determinations of projected need. Table 1 shows, by income group, the number of additional households each local government is to plan for. Table 2 shows the construction needed to accommodate, by income, the additional households by July 1997, including an allowance for normal market removals.

METHODOLOGY

Allocations of Household Growth

The July 1, 1997 household projections for Colusa, Glenn, and Tehama Counties were prepared by the California Department of Housing and Community Development (HCD) based on California Department of Finance household projections released in May 1991. The allocations of shares of household growth shown in Table 1 are based on a continuation of the household growth patterns that occurred between 1980 and 1990. The trend line method of allocation is based on assessment of the expected economic conditions within the county during the planning period compared to the prior decade and on a determination that adequate sites and public facilities were available throughout the county during the 1980s and will continue to be available during the planning period. Basing the growth allocations on trend line and economic expectations takes into consideration market demand for housing, type and tenure of housing need, existing and projected employment patterns, and existing commuting patterns and public transportation facilities.

Farmworker housing need is included in the very low and other lower income allocations. Loss of units contained in assisted housing developments is not expected to be a factor during the planning period.

Allocations of Household Growth by Income

Four income groups are used in this plan. They are: Very Low, Other Lower, Moderate, and Above Moderate. Definitions for these terms are given in the Appendix.

In allocating household growth by income, each jurisdiction is considered to constitute a separate housing market area. The economic characteristics of each jurisdiction are not projected to change by 1997; and, except for the City of Tehama, within each county, each jurisdiction has relatively similar income group profiles. For these reasons, except for the City of Tehama, the income group allocations are based on continuance of the existing income distribution in each jurisdiction. Because of its high percentage of lower income households, it is appropriate to allocate its small growth allocation based on the regional income percentages.

Basic Construction Needs

The basic construction needs were prepared by, first, preparing each of the components shown in the "By Components" section of Table 2 and then determining the number of units needed by income group. The formulas used in calculating each of the components of the construction needs are shown in the Appendix. The ownership rates and the "vacant-not-for-sale-or-rent" rates were taken from the 1990 U.S. Census. They and the annual removal rates used in the calculations are shown at the bottom of Table 2.

The percentages used in allocating the total construction need by income group are the percentages shown in the last column of Table 1. This means that, for each local government, household growth and construction need are allocated by income using the same income group percentages.

USE OF THE PLAN

The principal use of the allocations in this plan is inclusion in the local housing element as the shares of regional housing need. By doing this, the local government is planning to accommodate its share of the projected growth of the county and to provide opportunities for all income groups to have access to housing throughout the county.

Because regional housing needs plans are prepared a year or more before the statutory deadline for housing element updates, typically additional units have been built during the time period between the base date of the regional housing needs plan and the adoption of the housing element update. Local governments may reduce their allocations of construction need by the number of units which have been completed since the base date

of this plan. Instructions for how to estimate the number of units completed by income group are available as part of a technical assistance package on housing element preparation which is available from HCD's Division of Housing Policy Development.

The shares of regional need contained in this plan are only a portion of the housing needs which are to be included in the local housing element. For example, housing elements are additionally required to include estimated affordability needs. This involves making estimates of the current number of lower income households (the very low and other lower income categories) who pay more than they can afford for housing.

Other existing needs which are to be included in housing elements but which are not included in this plan include estimates of overcrowding, of the needs of special groups, and of the number of housing units which are in substandard physical condition. Estimates of substandard units should include both estimates of the units which need rehabilitation and the units which are so substandard that they need to be removed.

The basic construction needs in this plan do not include allowances for all construction needs which result from the need to remove units which are beyond repair or are not economically feasible to repair. Units which are removed from the housing stock in the normal course of housing market activity (demolitions, changes to commercial use, etc.) are not necessarily the substandard units. Consequently, the basic construction needs are to be supplemented by estimates of construction needed because of the need to remove units which are in poor physical condition.

The determinations (shown in Table 2) that there was or was not a sufficient number of housing units on the beginning date of this plan was made without regard to the physical condition of the housing stock, both occupied and vacant. The local housing element should estimate the units which are in substandard condition and assess whether there is sufficient existing standard housing.

PLAN REVISION PROCESS

Local Revision Process

The adoption of this plan by the council of governments commences a 90-day period during which each of the local governments in the Tri-County area may propose

revisions to the plan. If there are no proposed local revisions, this plan will become final on the expiration of the 90-day period.

If a proposed local revision is submitted to the council of governments during the 90-day period, the council has the 60-day period following the expiration of the 90-day local revision period in which to act. The council may approve the proposed local revision, modify its prior determination, or indicate why the proposed revision is inconsistent with the regional need. If the council does not accept a proposed revision, a public hearing may be requested within 30 days. The council of governments' final action on the local revision proposal shall constitute the local government's share of regional need which is to be included in the local housing element.

The standards and procedures for proposing local revisions, council of governments actions on them, and local government rights in the process are contained in Government Code Section 65584(c). A copy of that section is included in the Appendix.

Later Changes in the Plan

Prior to this year, state law permitted no changes in regional housing needs plans following completion of the statutory local revision process. Effective January 1, 1991, Government Code Section 65584(c)(5) provides for one type of change at a later date. The only change permitted is transfer of a portion of a county's allocation to one or more cities within the county. The transfer must meet the standards applicable to the original allocation of local shares of regional need and have the approval of the county, the affected cities, and the council of governments. Events which might lead to use of these provisions include major changes in the local economy, changes in annexation policies or agreements, and the incorporation of a new city.

APPENDIX C

Contents:

1. Copy of Government Code Section 65584.
2. Definitions of Income Groups.
3. Formulas used in calculating basic construction needs (Table 2).
4. Copy of California Department of Finance estimates for January 1, 1991.

GOVERNMENT CODE SECTION 65584

65584. (a) For purposes of subdivision (a) of Section 65583, the share of a city or county of the regional housing needs includes that share of the housing need of persons at all income levels within the area significantly affected by a general plan of the city or county. The distribution of regional housing needs shall, based upon available data, take into consideration market demand for housing, employment opportunities, the availability of suitable sites and public facilities, commuting patterns, type and tenure of housing need, the loss of units contained in assisted housing developments, as defined in paragraph (8) of subdivision (a) of Section 65583, that changed to non-low-income use through mortgage prepayment, subsidy contract expirations, or termination of use restrictions, and the housing needs of farmworkers. The distribution shall seek to reduce the concentration of lower income households in cities or counties which already have disproportionately high proportions of lower income households. Based upon data provided by the Department of Finance, in consultation with each council of government, the Department of Housing and Community Development shall determine the regional share of the statewide housing need at least two years prior to the second revision, and all subsequent revisions as required pursuant to Section 65588. Based upon data provided by the department relative to the statewide need for housing, each council of governments shall determine the existing and projected housing need for its region. Within 30 days following notification of this determination, the department shall ensure that this determination is consistent with the statewide housing need. The department may revise the determination of the council of governments if necessary to obtain this consistency. The appropriate council of governments shall determine the share for each city or county consistent with the criteria of this subdivision and with the advice of the department subject to the procedure established pursuant to subdivision (c) at least one year prior to the second revision, and at five-year intervals following the second revision pursuant to Section 65588. The council of governments shall submit to the department information regarding the assumptions and methodology to be used in allocating the regional housing need. As part of the allocation of the regional housing need, the council of governments, or the department pursuant to subdivision (b), shall provide each city and county with data describing the assumptions and methodology used in calculating its share of the regional housing need. The department shall submit to each council of governments information regarding the assumptions and methodology to be used in allocating the regional share of the statewide housing need. As part of its determination of the regional share of the statewide housing need, the department shall provide each council of governments with data describing the assumptions and methodology used in calculating its share of the statewide housing need. The councils of governments shall provide each city and county with the department's information.

(b) For areas with no council of governments, the department shall determine housing market areas and define the regional housing need for cities and counties within these areas pursuant to the provisions for the distribution of regional housing needs in subdivision (a). Where the department determines that a city or county possesses the capability and resources and has agreed to accept the responsibility with respect to its jurisdiction for the identification and determination of housing market areas and

regional housing needs, the department shall delegate this responsibility to the cities and counties within these areas:

(c) (1) Within 90 days following a determination of a council of governments pursuant to subdivision (a); or the department's determination pursuant to subdivision (b), a city or county may propose to revise the determination of its share of the regional housing need in accordance with the considerations set forth in subdivision (a). The proposed revised share shall be based upon available data and accepted planning methodology, and supported by adequate documentation.

(2) Within 60 days after the time period for the revision by the city or county, the council of governments or the department, as the case may be, shall accept the proposed revision, modify its earlier determination, or indicate, based upon available data and accepted planning methodology, why the proposed revision is inconsistent with the regional housing need.

(A) If the council of governments or the department, as the case may be, does not accept the proposed revision, then the city or county shall have the right to request a public hearing to review the determination within 30 days.

(B) The city or county shall be notified within 30 days by certified mail, return receipt requested, of at least one public hearing regarding the determination.

(C) The date of the hearing shall be at least 30 days from the date of the notification.

(D) Before making its final determination, the council of governments or the department, as the case may be, shall consider comments, recommendations, available data, accepted planning methodology, and local geological and topographic restraints on the production of housing.

(3) If the council of governments or the department accepts the proposed revision or modifies its earlier determination, the city or county shall use that share. If the council of governments or the department grant a revised allocation pursuant to paragraph (1), the council of governments or the department shall ensure that the current total housing need is maintained. If the council of governments or department indicates that the proposed revision is inconsistent with the regional housing need, the city or county shall use the share which was originally determined by the council of governments or the department.

(4) The determination of the council of governments or the department, as the case may be, shall be subject to judicial review pursuant to Section 1094.5 of the Code of Civil Procedure.

(5) The council of governments or the department shall reduce the share of regional housing needs of a county if all of the following conditions are met:

(A) One or more cities within the county agree to increase its share or their shares in an amount which will make up for the reduction.

(B) The transfer of shares shall only occur between a county and cities within that county.

(C) The county's share of low-income and very low income housing shall be reduced only in proportion to the amount by which the county's share of moderate- and above moderate-income housing is reduced.

(D) The council of governments or the department, whichever assigned the county's share, shall have authority over the approval of the proposed reduction, taking into consideration the criteria of subdivision (a) of Section 65584.

(6) The housing element shall contain an analysis of the factors and circumstances, with all supporting data, justifying the revision. All materials and data used to justify any revision shall be made available upon request by any interested party within seven days upon payment of reasonable costs of reproduction unless the costs are waived due to economic hardship.

(d) (1) Except as provided in paragraph (2), any ordinance, policy, or standard of a city or county which directly limits, by number, the building permits which may be issued for residential construction, or which limits for a set period of time the number of buildable lots which may be developed for residential purposes, shall not be a justification for a determination or a reduction in the share of a city or county of the regional housing need.

(2) Paragraph (1) does not apply to any city or county which imposes a moratorium on residential construction for a set period of time in order to preserve and protect the public health and safety. If a moratorium is in effect, the city or county shall, prior to a revision pursuant to subdivision (c), adopt findings which specifically describe the threat to the public health and safety and the reasons why construction of the number of units specified as its share of the regional housing need would prevent the mitigation of that threat.

(e) Any authority to review and revise the share of a city or county of the regional housing need granted under this section shall not constitute authority to revise, approve, or disapprove the manner in which the share of the city or county of the regional housing need is implemented through its housing program.

(f) A fee may be charged interested parties for any additional costs caused by the amendments made to subdivision (c) by Chapter 1684 of the Statutes of 1984 reducing from 45 to seven days the time within which materials and data shall be made available to interested parties.

(g) Determinations made by the department, a council of governments, or a city or county pursuant to this section are exempt from the provisions of the California Environmental Quality Act; Division 13 (commencing with Section 21000) of the Public Resources Code.

Definitions of Income Groups

The income limits for a four-person household in Colusa, Glenn, and Tehama Counties are the following:

Very Low Income Income not exceeding 50% of area median family income.

Other Lower Income Income between 50% and 80% of area median family income.

Moderate Income Income between 80% and 120% of area median family income.

Above Moderate Income Income exceeding 120% of area median family income.

Income limits for other household sizes are calculated using household size adjustment factors. For example, the income limit for a one-person household for any income level is .7 times the four-person income limit for that income level.

In the Tri-County Area, area median family income is the higher of the county median family income or the statewide nonmetropolitan median family income, as estimated by the U.S. Department of Housing and Urban Development (HUD).

Basic Construction Needs Calculations

1. Determine Total Housing Units Needed in July 1997:

Owner households = July 1997 households X Homeownership factor

Owner Units Needed = Owner households + 0.98 (100% - 2% owner allowance)

Renter households = July 1997 households X Rentership factor

Renter Units Needed = Renter households + 0.94 (100% - 6% renter allowance)

Other Vacant Units Needed =

(Owner Units Needed + Renter Units Needed) + (100% - other vacant allowance)

Total Housing Units Needed in July 1997 =

Owner Units Needed + Renter Units Needed + Other Vacant Units Needed

2. Determine New Housing Units Needed to accommodate growth 1991 to 1997:

Units needed to accommodate growth = Units needed in 1997 - Units on Jan. 1, 1991

3. Determine Expected Normal Market Removals 1991 to 1997:

Average existing units 1991 to 1997 = $\frac{\text{Units needed in 1997} + \text{Units Jan. 1991}}{2}$

Removals per year = Average existing units 1991 to 1997 X 0.002

Total years Jan. 1991 to July 1997 = 6.5 years

Expected Normal Market Removals 1991 to 1997 = Removals per year X 6.5

4. Determine Basic Construction Need 1991 to 1997

Basic Construction Need 1991 to 1997 =

Units Needed for Growth + Expected Normal Market Removals 1991 to 1997

DEPARTMENT OF FINANCE ESTIMATES
FOR JANUARY 1, 1991

CALIFORNIA DEPARTMENT OF FINANCE
DEMOGRAPHIC RESEARCH UNIT

REPORT E-5 PRELIM
PAGE 6

COLUSA COUNTY POPULATION AND HOUSING ESTIMATES
JANUARY 1, 1991

PRINTED
05/03/91

CITY	----- POPULATION -----			----- HOUSING UNITS* -----			PERSON PER HOUSE- HOLD
	TOTAL	HOUSE- HOLD	GROUP QUARTER	TOTAL	OCCUPIED	PERCENT VACANT	
COLUSA	5015	4960	55	1920	1826	4.90	2.716
WILLIAMS	2420	2308	112	789	728	7.73	3.170

TOTAL INCORPORATED	7435	7268	167	2709	2554	5.72	2.846

UNINCORPORATED	9194	9001	193	3653	3117	14.67	2.888

COUNTY TOTAL	16629	16269	360	6362	5671	10.86	2.869

* HOUSING UNITS BY TYPE FROM THE 1990 CENSUS HAVE NOT BEEN RELEASED.
EXPECT THEM TO BE AVAILABLE FOR THE 1992 E-5 REPORT

CALIFORNIA DEPARTMENT OF FINANCE
DEMOGRAPHIC RESEARCH UNIT

REPORT E-5 PRELIM
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GLENN COUNTY POPULATION AND HOUSING ESTIMATES
JANUARY 1, 1991

PRINTED
05/03/91

CITY	----- POPULATION -----			----- HOUSING UNITS* -----			PERSON PER HOUSE- HOLD
	TOTAL	HOUSE- HOLD	GROUP QUARTER	TOTAL	OCCUPIED	PERCENT VACANT	
ORLAND	5182	5115	67	2019	1937	4.06	2.641
WILLOWS	6092	5927	165	2240	2138	4.55	2.772

TOTAL INCORPORATED	11274	11042	232	4259	4075	4.32	2.710

UNINCORPORATED	14051	13932	119	5127	4820	5.99	2.890

COUNTY TOTAL	25325	24974	351	9386	8895	5.23	2.808

HOUSING UNITS BY TYPE FROM THE 1990 CENSUS HAVE NOT BEEN RELEASED.
WE EXPECT THEM TO BE AVAILABLE FOR THE 1992 E-5 REPORT.

CALIFORNIA DEPARTMENT OF FINANCE
DEMOGRAPHIC RESEARCH UNIT

REPORT E-5 PRELIM
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TEHAMA COUNTY POPULATION AND HOUSING ESTIMATES
JANUARY 1, 1991

PRINT
05/03/

CONTROLLED CITY	----- POPULATION -----			----- HOUSING UNITS* -----			PERS PER HOUS HOLD
	TOTAL	HOUSE- HOLD	GROUP QUARTER	TOTAL	OCCUPIED	PERCENT VACANT	
CORNING	6035	5993	42	2480	2286	7.82	2.6
RED BLUFF	12568	12108	460	5130	4881	4.85	2.4
TEHAMA	408	408	0	177	165	6.78	2.4

TOTAL INCORPORATED	19011	18509	502	7787	7332	5.84	2.5

UNINCORPORATED	31886	31489	397	13204	11795	10.67	2.6

COUNTY TOTAL	50897	49998	899	20991	19127	8.88	2.6

* HOUSING UNITS BY TYPE FROM THE 1990 CENSUS HAVE NOT BEEN RELEASED.
WE EXPECT THEM TO BE AVAILABLE FOR THE 1992 E-5 REPORT

DEPARTMENT OF FINANCE
915 L STREET
SACRAMENTO, CA 95814-4998



1990 CENSUS

STF 3 Standard 6-Page Profile

The enclosed report was generated from Summary Tape File 3 (STF3). Direct questions concerning these data to the State Census Data Center, 915 L Street, Sacramento, CA 95814. Telephone (916) 322-4651.

Summary Tape File 3 contains sample data collected from approximately 16.6 percent of the total housing units. These data were then weighted to represent the total population. Data include: citizenship; educational attainment; labor force status; income; poverty status; industry; occupation; language spoken at home and ability to speak English; transportation to work; mobility and self-care limitations; residence in 1985; mortgage status; year structure built; and selected monthly owner costs.

In addition to the data collected only on a sample basis, STF3 also contains 100-percent data items such as race, Hispanic origin, sex, etc. Although these data items were collected on a 100-percent basis, the counts for these items shown in STF3 are based on the sample questionnaires. Therefore, the counts shown in STF3 for these items will not always match the counts found in 100-percent tabulations such as Summary Tape File 1. This can effect the calculation of percentages or rates, if the numerator and the denominator do not come from the same file.

A brief description of the terms and concepts used in STF3 is included with this cover sheet. For a complete glossary of census terms see the Technical Documentation for STF3.

A list of selected data items and their location is below:

Citizenship	3
Commute to Work	3
Disability	4
Education	1
Gross Rent	6
Income	2,4
Industry	5
Labor Force Status	4,5
Language Spoken at Home	1
Mortgage Status	6
Occupation	5
Place of Work	3
Poverty	2
Tenure	5,6
Veterans	4

Labor Force (Employment) Status--The series of questions on employment status was designed to identify, in this sequence: (1) persons who worked at any time during the reference week (employed); (2) persons who did not work during the reference week but had jobs or businesses from which they were temporarily absent (excluding layoff) (employed); (3) persons on layoff (not in labor force); and (4) persons who did not work during the reference week, but who were looking for work during the last four weeks and were available for work during the reference week (unemployed).

Language Spoken at Home--Includes only those who sometimes or always spoke a language other than English at home. It does not include those who spoke a language other than English only at school or limited to only a few expressions or slang.

Mobility Limitation Status--Persons were identified as having a mobility limitation if they had a health condition that lasted 6 or more months and which made it difficult to go outside the home alone such as going shopping and visiting the doctor's office.

Occupied Housing Unit--A housing unit is classified as occupied if it is the usual place of residence of the person or group of persons living in it at the time of enumeration, or if the occupants are only temporarily absent; that is, away on vacation or business. (Count of Occupied Housing units is the same as the count of Households).

Own Children--A never-married child under 18 years who is a son or daughter by birth, a stepchild, or an adopted child of the householder.

Per Capita Income--Is derived by dividing the total income of a particular area by the total population.

Poverty Status in 1989--Poverty status was determined for all persons except institutionalized persons, persons in military group quarters and in college dormitories, and unrelated individuals under 15 years old. These groups were excluded from the denominator when calculating poverty rates. The income cutoffs used by the Census Bureau to determine the poverty status of families and unrelated are arranged in a matrix consisting of family size cross-classified by presence and number of family members under 18 years old. The average poverty threshold for a family of four persons was \$12,674 in 1989.

Preprimary School--Includes kindergarten and nursery school.

Race--The concept of race as used by the Census Bureau reflects self-identification; it does not denote any clearcut scientific definition of biological stock. The racial categories used are White; Black; American Indian, Eskimo, or Aleut; Asian or Pacific Islander; and Other Race not elsewhere classified. The "other race" includes provisions for a write-in space. (see also: Hispanic Origin)

Related Children--Includes own children and all other persons under 18 years of age in the household, regardless of marital status, except the spouse of the householder.

Selected Monthly Owner Costs--The sum of payments for mortgages, deeds of trust, contracts to purchase, or similar debts on the property; real estate taxes; fire, hazard, and flood insurance on the property; utilities; and fuels. It also includes, where appropriate, the monthly condominium fees or mobile home costs.

STATE: CALIFORNIA COUNTY: TEHAMA

PLACE: RED BLUFF CITY

P1/2/3/6. PERSONS

TOTAL	12363
UNWEIGHTED SAMPLE	1454
100% COUNT	12363
URBAN	12363
INSIDE URBANIZED AREAS	0
OUTSIDE URBANIZED AREAS	12363
RURAL	0
RURAL FARM	0
RURAL NONFARM	0

P7. SEX
(UNIVERSE: PERSONS)

MALE	5915
FEMALE	6448

P8. RACE
(UNIVERSE: PERSONS)

WHITE	11278
BLACK	94
AMER IND, ESK, OR ALEUT	278
ASIAN OR PAC ISLANDER	114
OTHER RACE	599

P10. PERSONS OF HISPANIC
ORIGIN

P4. FAMILIES	3218
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P5. HOUSEHOLDS	4815
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P28. LANGUAGE SPOKEN AT HOME AND ABILITY
TO SPEAK ENGLISH
(UNIVERSE: PERSONS 5 YEARS & OVER)

SPEAK ONLY ENGLISH	10308
SPEAK SPANISH:	
SPEAK ENGLISH "VERY WELL"	219
SPEAK ENGLISH "WELL"	85
SPEAK ENGLISH "NOT WELL" OR NOT "NOT AT ALL"	281
SPEAK ASIAN OR PAC ISLAND LANGUAGE:	
SPEAK ENGLISH "VERY WELL"	38
SPEAK ENGLISH "WELL"	10
SPEAK ENGLISH "NOT WELL" OR NOT "NOT AT ALL"	17
SPEAK OTHER LANGUAGE:	
SPEAK ENGLISH "VERY WELL"	208
SPEAK ENGLISH "WELL"	44
SPEAK ENGLISH "NOT WELL" OR NOT "NOT AT ALL"	11

P22. FAMILY TYPE AND PRESENCE AND AGE OF
CHILDREN
(UNIVERSE: FAMILIES)

MARRIED-COUPLE FAMILY:	
WITH CHILDREN 18 YEARS & OVER	250
NO CHILDREN 18 YEARS & OVER	2139

OTHER FAMILY:	
MALE HOUSEHOLDER, NO SPOUSE:	
WITH CHILDREN 18 YEARS & OVER	26
NO CHILDREN 18 YEARS & OVER	159
FEMALE HOUSEHOLDER, NO SPOUSE:	
WITH CHILDREN 18 YEARS & OVER	108
NO CHILDREN 18 YEARS & OVER	536

P43. RESIDENCE IN 1985--STATE & COUNTY LEVEL
(UNIVERSE: PERSONS 5 YEARS & OVER)

SAME HOUSE IN 1985	4920
DIFFERENT HOUSE IN U.S. IN 1985:	
SAME COUNTY	3133
DIFFERENT COUNTY, SAME STATE	2112
DIFFERENT STATE:	
NORTHEAST	32
MIDWEST	82
SOUTH	283
WEST	561
ABROAD IN 1985:	
PUERTO RICO	0
U.S. OUTLYING AREA	0
FOREIGN COUNTRY	98

P54. SCHOOL ENROLLMENT AND TYPE OF SCHOOL
(UNIVERSE: PERSONS 3 YEARS & OVER)

ENROLLED IN PREPRIMARY SCHOOL:	
PUBLIC SCHOOL	132
PRIVATE SCHOOL	81
ENROLLED IN ELEMENTARY OR HIGH SCHOOL:	
PUBLIC SCHOOL	2238
PRIVATE SCHOOL	80
ENROLLED IN COLLEGE:	
PUBLIC SCHOOL	598
PRIVATE SCHOOL	95
NOT ENROLLED IN SCHOOL	8515

P57/58/59/60. EDUCATIONAL ATTAINMENT BY RACE AND HISPANIC ORIGIN

	PERSONS 18 YEARS & OVER	PERSONS 25 YEARS & OVER							HISPANIC ORIGIN
	TOTAL	TOTAL	WHITE	BLACK	AMER IND/ ESK/ALEUT	ASIAN & PAC ISL	OTHER	*	
ELEMENTARY (0 TO 8 YEARS)	710	666	450	0	6	26	184	*	217
HIGH SCHOOL (1 TO 4 YEARS), NO DIPLOMA	1369	1001	989	3	9	0	0	*	51
HIGH SCHOOL DIPLOMA	3207	2830	2644	21	62	9	94	*	125
SOME COLLEGE, NO DEGREE	2101	1765	1696	0	30	18	21	*	55
ASSOCIATE DEGREE	691	626	603	0	12	11	0	*	9
BACHELORS DEGREE	643	632	581	15	4	14	18	*	33
GRADUATE OR PROFESSIONAL DEGREE	185	175	175	0	0	0	0	*	4

PLACE: RED BLUFF CITY

P82/83/84/85. HOUSEHOLD INCOME IN 1989 BY RACE/HISPANIC ORIGIN OF HOUSEHOLDER
(UNIVERSE: HOUSEHOLDS)

	WHITE	BLACK	AMER IND/ ESK/ALEUT	ASIAN/ PAC ISL	OTHER	* HISPANIC ORIGIN	P121. RATIO OF INCOME IN 1989 TO POVERTY LEVEL (UNIVERSE: PERSONS FOR WHOM POVERTY STATUS IS DETERMINED)	
\$ 0 - 4,999	150	0	12	4	21	*	21	
\$ 5,000 - 9,999	894	0	21	9	14	*	30	UNDER .50 751
\$ 10,000 - 14,999	639	8	5	7	21	*	39	.50 TO .74 697
\$ 15,000 - 24,999	1032	3	9	18	97	*	129	.75 TO .99 988
\$ 25,000 - 34,999	709	0	6	0	0	*	21	1.00 TO 1.24 777
\$ 35,000 - 49,999	610	0	22	0	0	*	24	1.25 TO 1.49 1004
\$ 50,000 - 74,999	332	0	12	4	15	*	15	1.50 TO 1.74 768
\$ 75,000 - 99,999	96	0	0	0	0	*	0	1.75 TO 1.84 408
\$ 100,000 OR MORE	45	0	0	0	0	*	0	1.85 TO 1.99 257
								2.00 AND OVER 6286
MEAN	\$24,893	\$13,475	\$25,700	\$19,033	\$16,745	*	\$19,317	TOTAL 11936

STATE: CALIFORNIA COUNTY: TEHAMA

PLACE: RED BLUFF CITY

P45/46/47/48. PLACE OF WORK
(UNIVERSE: WORKERS 16 YEARS & OVER)

WORKED IN STATE OF RESIDENCE:
WORKED IN COUNTY OF RESIDENCE 3816
WORKED OUTSIDE COUNTY OF RESIDENCE 508
WORKED OUTSIDE STATE OF RESIDENCE 17

LIVING IN AN MSA/PMSA:
WORKED IN MSA OF RESIDENCE:
CENTRAL CITY 0
REMAINDER OF THIS MSA 0
WORKED OUTSIDE MSA OF RESIDENCE:
WORKED IN A DIFFERENT MSA:
CENTRAL CITY 0
REMAINDER OF DIFFERENT MSA 0
WORKED OUTSIDE ANY MSA 0
NOT LIVING IN AN MSA/PMSA:
WORKED IN AN MSA:
CENTRAL CITY 227
REMAINDER OF MSA 235
WORKED OUTSIDE ANY MSA 3879

LIVING IN A PLACE:
WORKED IN PLACE OF RESIDENCE 2969
WORKED OUTSIDE PLACE OR RESIDENCE 1372
NOT LIVING IN A PLACE 0

P49. MEANS OF TRANSPORTATION TO WORK
(UNIVERSE: WORKERS 16 YEARS & OVER)

CAR, TRUCK, OR VAN: 3345
DROVE ALONE 3345
CARPOOLED 520
PUBLIC TRANSPORTATION:
BUS OR TROLLEY BUS 0
STREETCAR OR TROLLEY CAR 0
SUBWAY OR ELEVATED 0
RAILROAD 0
FERRYBOAT 0
TAXICAB 0
MOTORCYCLE 20
BICYCLE 73
WALKED 120
OTHER MEANS 61
WORKED AT HOME 202

TOTAL WORKERS 4341

P50/51. TRAVEL TIME TO WORK
(UNIVERSE: WORKERS 16 YEARS & OVER)

MINUTES
0 - 4 307
5 - 9 1320
10 - 14 1138
15 - 19 350
20 - 24 362
25 - 29 94
30 - 34 237
35 - 39 59
40 - 44 37
45 - 59 136
60 - 89 51
90 OR MORE 48
WORKED AT HOME 202

MEAN TRAVEL TIME 14 MINUTES

P53. PRIVATE VEHICLE OCCUPANCY
(UNIVERSE: WORKERS 16 YEARS & OVER)

CAR, TRUCK, OR VAN:
DROVE ALONE 3345
IN 2-PERSON CARPOOL 429
IN 3-PERSON CARPOOL 44
IN 4-PERSON CARPOOL 9
IN 5-PERSON CARPOOL 17
IN 6-PERSON CARPOOL 12
IN 7-OR-MORE CARPOOL 9
OTHER MEANS 476

P52. TIME LEAVING HOME TO GO TO WORK
(UNIVERSE: WORKERS 16 YEARS & OVER)

12:00 AM TO 4:59 AM 199
5:00 AM TO 5:29 AM 127
5:30 AM TO 5:59 AM 251
6:00 AM TO 6:29 AM 350
6:30 AM TO 6:59 AM 409
7:00 AM TO 7:29 AM 406
7:30 AM TO 7:59 AM 650
8:00 AM TO 8:29 AM 519
8:30 AM TO 8:59 AM 150
9:00 AM TO 9:59 AM 141
10:00 AM TO 10:59 AM 104
11:00 AM TO 11:59 AM 59
12:00 PM TO 3:59 PM 407
4:00 PM TO 11:59 PM 367

WORKED AT HOME 202

H37/38. TENURE BY VEHICLES AVAILABLE
(UNIVERSE: OCCUPIED HOUSING UNITS)

	TOTAL	OWNER	RENTER
NONE	507	150	357
1	1915	745	1170
2	1637	1012	625
3	623	447	176
4	101	62	39
5 OR MORE	29	0	29
MEAN VEHICLES	1.59	1.80	1.38

P36. YEAR OF ENTRY
(UNIVERSE: FOREIGN-BORN PERSONS)

1987 TO 1990	105	1970 TO 1974	101
1985 OR 1986	54	1965 TO 1969	10
1982 TO 1984	47	1960 TO 1964	18
1980 OR 1981	94	1950 TO 1959	55
1975 TO 1979	50	BEFORE 1950	108

P37. AGE BY CITENSHIP
(UNIVERSE: PERSONS)

UNDER 18 YEARS:	
NATIVE	3390
FOREIGN BORN:	
NATURALIZED CITIZEN	3
NOT A CITIZEN	64
18 YEARS AND OVER:	
NATIVE	8331
FOREIGN BORN:	
NATURALIZED CITIZEN	222
NOT A CITIZEN	353

P42. PLACE OF BIRTH
(UNIVERSE: PERSONS)

NATIVE:	
BORN IN STATE OF RESIDENCE	7668
BORN IN OTHER STATE IN THE U.S.:	
NORTHEAST	366
MIDWEST	1300
SOUTH	863
WEST	1442
BORN OUTSIDE THE U.S.:	
PUERTO RICO	0
U.S. OUTLYING AREA	0
BORN ABROAD OF AMERICAN	
PARENT(S)	82
FOREIGN BORN	642

STATE: CALIFORNIA COUNTY: TEHAMA

PLACE: RED BLUFF CITY

P70/71/72. LABOR FORCE STATUS BY SEX AND RACE/HISPANIC ORIGIN
(UNIVERSE: PERSONS 16 YEARS & OVER)

	TOTAL	WHITE	BLACK	AMER IND/ ESK/ALEUT	ASIAN OR PAC ISL	OTHER	*	HISPANIC ORIGIN
MALE:							*	
IN LABOR FORCE	2804	2461	8	56	35	244	*	340
IN ARMED FORCES	0	0	0	0	0	0	*	0
CIVILIAN	2804	2461	8	56	35	244	*	340
EMPLOYED	2467	2211	8	45	35	168	*	249
UNEMPLOYED	337	250	0	11	0	76	*	91
NOT IN LABOR FORCE	1422	1344	32	18	7	21	*	57
FEMALE:							*	
IN LABOR FORCE	2144	2045	0	46	17	36	*	91
IN ARMED FORCES	0	0	0	0	0	0	*	0
CIVILIAN	2144	2045	0	46	17	36	*	91
EMPLOYED	1992	1902	0	37	17	36	*	86
UNEMPLOYED	152	143	0	9	0	0	*	5
NOT IN LABOR FORCE	2784	2594	11	56	32	91	*	157

P89 THROUGH P105. HOUSEHOLDS AND MEAN HOUSEHOLD
INCOME IN 1989 BY INCOME SOURCE

	HOUSEHOLDS	MEAN INCOME
WITH WAGE OR SALARY	3126	\$24,954
NO WAGE OR SALARY	1689	
WITH NONFARM SELF-EMPLOYMENT	569	\$12,851
NO NONFARM SELF-EMPLOYMENT	4246	
WITH FARM SELF-EMPLOYMENT	32	\$207
NO FARM SELF-EMPLOYMENT	4783	
WITH INT, DIV, OR NET RENTAL	1394	\$5,417
NO INT, DIV, OR NET RENTAL	3421	
WITH SOCIAL SECURITY	1424	\$8,037
NO SOCIAL SECURITY	3391	
WITH PUBLIC ASSISTANCE	964	\$6,003
NO PUBLIC ASSISTANCE	3851	
WITH RETIREMENT	765	\$7,702
NO RETIREMENT	4050	
WITH OTHER INCOME	704	\$3,111
NO OTHER INCOME	4111	
WITH EARNINGS	3289	\$25,943
NO EARNINGS	1526	

P68. SEX BY AGE BY WORK DISABILITY STATUS
STATUS BY MOBILITY AND SELF-CARE
LIMITATION STATUS
(UNIVERSE: CIVILIAN NONINSTITUTIONALIZED
PERSONS 16 YEARS & OVER)

	MALE	FEMALE
16 TO 64 YEARS:		
WITH A WORK DISABILITY:		
WITH A MOBILITY OR		
SELF-CARE LIMITATION	571	417
NO MOBILITY OR		
SELF-CARE LIMITATION	9	21
NO WORK DISABILITY:		
WITH A MOBILITY OR		
SELF-CARE LIMITATION	45	127
NO MOBILITY OR		
SELF-CARE LIMITATION	2737	3080
65 YEARS AND OVER:		
WITH A WORK DISABILITY:		
WITH A MOBILITY OR		
SELF-CARE LIMITATION	264	294
NO MOBILITY OR		
SELF-CARE LIMITATION	9	29
NO WORK DISABILITY:		
WITH A MOBILITY OR		
SELF-CARE LIMITATION	8	15
NO MOBILITY OR		
SELF-CARE LIMITATION	458	735

P79. CLASS OF WORKER
(UNIVERSE: EMPLOYED PERSONS
16 YEARS & OVER)

WAGE AND SALARY:	
PRIVATE FOR PROFIT	3068
PRIVATE NOT-FOR-PROFIT	221
SELF-EMPLOYED	448
GOVERNMENT:	
LOCAL	399
STATE	126
FEDERAL	170
UNPAID FAMILY	27

P65. PERIOD OF MILITARY SERVICE
(UNIVERSE: CIVILIAN VETERANS
16 YEARS & OVER)

SEPT 1980 OR LATER ONLY	108
MAY 1975 TO AUG 1980 ONLY	42
MAY 1975 TO AUGUST 1980 & SEPTEMBER 1980 OR LATER	0
VIETNAM ERA	394
FEB 1955 TO JUL 1964 ONLY	186
VIETNAM ERA & KOREAN CONFLICT	18
KOREAN CONFLICT	208
KOREAN CONFLICT & WWII	50
WORLD WAR II	486
WORLD WAR I	17
OTHER SERVICE	16

TOTAL 1525

STATE: CALIFORNIA COUNTY: TEHAMA

PLACE: RED BLUFF CITY

P78. OCCUPATION

(UNIVERSE: EMPLOYED PERSONS 16 YEARS & OVER)

MANAGERIAL & PROFESSIONAL SPECIALTY OCCUPATIONS:

EXECUTIVE, ADMINISTRATIVE, & MANAGERIAL 449
PROFESSIONAL SPECIALTY 352

TECHNICAL, SALES, & ADMINISTRATIVE SUPPORT:

TECHNICIANS & RELATED SUPPORT 117

SALES 508

ADMINISTRATIVE SUPPORT, INCLUDING CLERICAL 634

SERVICE OCCUPATIONS:

PRIVATE HOUSEHOLD 7

PROTECTIVE SERVICE 63

SERVICE, EXCEPT PROTECTIVE & HOUSEHOLD 679

FARMING, FORESTRY, & FISHING OCCUPATIONS

225

PRECISION PRODUCTION, CRAFT, & REPAIR OCCUPATIONS

523

OPERATORS, FABRICATORS, & LABORERS:

MACHINE OPERATORS, ASSEMBLERS, & INSPECTORS 460

TRANSPORTATION & MATERIAL MOVING 201

HANDLERS, EQUIPMENT CLEANERS, HELPERS, & LABORERS 241

P77. INDUSTRY

(UNIVERSE: EMPLOYED PERSONS 16 YEARS & OVER)

AGRICULTURE, FORESTRY, AND FISHERIES 168

MINING 0

CONSTRUCTION 275

MANUFACTURING, NONDURABLE GOODS 354

MANUFACTURING, DURABLE GOODS 589

TRANSPORTATION 134

COMMUNICATIONS AND OTHER PUBLIC UTILITIES 99

WHOLESALE TRADE 102

RETAIL TRADE 965

FINANCE, INSURANCE, AND REAL ESTATE 223

BUSINESS AND REPAIR SERVICES 205

PERSONAL SERVICES 190

ENTERTAINMENT AND RECREATION SERVICES 35

PROFESSIONAL AND RELATED SERVICES:

HEALTH SERVICES 353

EDUCATIONAL SERVICES 305

OTHER PROFESSIONAL AND RELATED SERVICES 238

PUBLIC ADMINISTRATION 224

P73. PRESENCE & AGE OF CHILDREN & EMPLOYMENT STATUS

(UNIVERSE: FEMALES 16 YEARS & OVER)

WITH OWN CHILDREN UNDER 18 YEARS:

UNDER 6 YEARS ONLY:

IN LABOR FORCE: 229

EMPLOYED OR IN ARMED FORCES 20

UNEMPLOYED 341

NOT IN LABOR FORCE

6 TO 17 YEARS ONLY:

IN LABOR FORCE: 457

EMPLOYED OR IN ARMED FORCES 22

UNEMPLOYED 222

NOT IN LABOR FORCE

UNDER 6 YEARS & 6 TO 17 YEARS:

IN LABOR FORCE: 141

EMPLOYED OR IN ARMED FORCES 25

UNEMPLOYED 224

NOT IN LABOR FORCE

NO OWN CHILDREN UNDER 18 YEARS:

IN LABOR FORCE: 1165

EMPLOYED OR IN ARMED FORCES 85

UNEMPLOYED 1997

NOT IN LABOR FORCE

P74. PRESENCE & AGE OF CHILDREN BY EMPLOYMENT STATUS OF PARENTS

(UNIVERSE: OWN CHILDREN UNDER 18 YEARS)

UNDER 6 YEARS:

LIVING WITH TWO PARENTS:

BOTH PARENTS IN LABOR FORCE 326

FATHER ONLY IN LABOR FORCE 382

MOTHER ONLY IN LABOR FORCE 22

NEITHER PARENT IN LABOR FORCE 42

LIVING WITH ONE PARENT:

LIVING WITH FATHER:

IN LABOR FORCE 65

NOT IN LABOR FORCE 0

LIVING WITH MOTHER:

IN LABOR FORCE 104

NOT IN LABOR FORCE 353

6 TO 17 YEARS:

LIVING WITH TWO PARENTS:

BOTH PARENTS IN LABOR FORCE 808

FATHER ONLY IN LABOR FORCE 374

MOTHER ONLY IN LABOR FORCE 54

NEITHER PARENT IN LABOR FORCE 80

LIVING WITH ONE PARENT:

LIVING WITH FATHER:

IN LABOR FORCE 86

NOT IN LABOR FORCE 59

LIVING WITH MOTHER:

IN LABOR FORCE 255

NOT IN LABOR FORCE 250

H1/2/3. HOUSING UNITS

(UNIVERSE: HOUSING UNITS)

TOTAL 5062

OCCUPIED 4812

OWNER OCCUPIED 2416

RENTER OCCUPIED 2396

VACANT 250

UNWEIGHTED SAMPLE COUNT 593

100-PERCENT COUNT 5062

H5. URBAN AND RURAL

(UNIVERSE: HOUSING UNITS)

URBAN 5062

INSIDE URBANIZED AREA 0

OUTSIDE URBANIZED AREA 5062

RURAL 0

FARM 0

NONFARM 0

H24. SEWAGE DISPOSAL

(UNIVERSE: HOUSING UNITS)

PUBLIC SEWER 4911

SEPTIC TANK OR CESSPOOL 151

OTHER MEANS 0

STATE: CALIFORNIA COUNTY: TEHAMA

PLACE: RED BLUFF CITY

H8 THROUGH H12. TENURE BY RACE & HISPANIC ORIGIN OF
HOUSEHOLDER
(UNIVERSE: OCCUPIED HOUSING UNITS)

	TOTAL	OWNER	RENTER
WHITE	4524	2326	2198
BLACK	16	16	0
AMER IND/ESK/ALEUT	127	41	86
ASIAN/PAC ISLANDER	67	17	50
OTHER	78	16	62
HISPANIC ORIGIN	216	97	119

H30. HOUSE HEATING FUEL
(UNIVERSE: OCCUPIED HOUSING UNITS)

UTILITY GAS	3405
BOTTLED, TANK, OR LP GAS	73
ELECTRICITY	924
FUEL OIL, KEROSENE, ETC.	13
COAL OR COKE	0
WOOD	383
SOLAR ENERGY	0
OTHER FUEL	7
NO FUEL USED	7

H25. YEAR STRUCTURE BUILT
(UNIVERSE: HOUSING UNITS)

1989 TO MARCH 1990	57
1985 TO 1988	484
1980 TO 1984	812
1970 TO 1979	960
1960 TO 1969	714
1950 TO 1959	980
1940 TO 1949	366
1939 OR EARLIER	689

MEDIAN YEAR 1967

H52/53. MORTGAGE STATUS & SELECTED MONTHLY OWNER COSTS
(UNIVERSE: SPECIFIED OWNER-OCCUPIED HOUSING UNITS)

WITH A MORTGAGE:	NOT MORTGAGED:	
\$ 0 - 299	\$ 0 - 99	90
\$ 300 - 499	\$100 - 149	197
\$ 500 - 699	\$150 - 199	207
\$ 700 - 899	\$200 - 249	130
\$ 900 - 1249	\$250 - 299	41
\$1250 - 1499	\$300 - 349	25
\$1500 - 1999	\$350 - 399	0
\$2000 OR MORE	\$400 OR MORE	11
MEDIAN	MEDIAN	\$165
MEAN	MEAN	\$174

H31. BEDROOMS
(UNIVERSE: HOUSING UNITS)

	TOTAL	-OCCUPIED UNITS- OWNER	RENTER
NONE	162	31	99
1	751	105	584
2	2088	738	1249
3	1769	1325	393
4	260	195	61
5 OR MORE	32	22	10

H43. GROSS RENT
(UNIVERSE: SPECIFIED RENTER-
OCCUPIED HOUSING UNITS)

\$ 0 - 99	0
\$ 100 - 149	98
\$ 150 - 199	135
\$ 200 - 249	267
\$ 250 - 299	179
\$ 300 - 349	448
\$ 350 - 399	414
\$ 400 - 449	228
\$ 450 - 499	204
\$ 500 - 549	134
\$ 550 - 599	87
\$ 600 - 649	56
\$ 650 - 699	61
\$ 700 - 749	0
\$ 750 - 999	41
\$1000 OR MORE	0
NO CASH RENT	44

H50/59. HOUSEHOLD INCOME IN 1989 BY SELECTED MONTHLY OWNER COSTS/GROSS RENT AS A PERCENTAGE OF
HOUSEHOLD INCOME IN 1989

(UNIVERSE: SPECIFIED OWNER-OCCUPIED HOUSING UNITS)

	0-19%	20-24%	25-29%	30-34%	35+%	NOT COMPUTED
INCOME						
LESS THAN \$10,000	44	30	22	0	134	14
\$10,000 - 19,999	215	91	44	9	149	0
\$20,000 - 34,999	284	69	56	80	50	0
\$35,000 - 49,999	253	103	32	15	0	0
\$50,000 OR MORE	293	16	7	0	0	0
TOTAL UNITS	1089	309	161	104	333	14

(UNIVERSE: SPECIFIED RENTER-OCCUPIED HOUSING UNITS)

	0-19%	20-24%	25-29%	30-34%	35+%	NOT COMPUTED
LESS THAN \$10,000	0	55	81	115	560	36
\$10,000 - 19,999	59	89	139	101	249	15
\$20,000 - 34,999	368	129	45	23	26	0
\$35,000 - 49,999	152	35	6	0	0	0
\$50,000 OR MORE	89	0	0	0	0	24
TOTAL UNITS	668	308	271	239	835	75

MEDIAN RENT \$356
MEAN RENT \$370

H23. SOURCE OF WATER
(UNIVERSE: HOUSING UNITS)

PUBLIC SYSTEM OR PRIVATE COMPANY	4975
INDIVIDUAL WELL:	
DRILLED	82
DUG	5
SOME OTHER SOURCE	0

H35. TELEPHONE IN HOUSING UNIT
(UNIV: OCCUPIED HOUSING UNITS)

WITH TELEPHONE	4594
NO TELEPHONE	218

APPENDIX D REFERENCES

- Association of Bay Area Governments. 1989. Blueprint for Bay Area Housing. San Francisco, CA: Local Housing Assistance Project.
- California Department of Housing and Community Development 1980. Article 34: Legal Issues and Ballot Measures.
- California Department of Housing and Community Development. 1987. Jobs Housing Balance.
- California Department of Housing and Community Development. 1988. Migrant Farmworker Housing in California. Sacramento, CA: California Department of Housing and Community Development.
- California Department of Housing and Community Development. 1990(a). Statewide Housing Plan Update. Sacramento, CA: California Department of Housing and Community Development.
- California Department of Housing and Community Development. 1990(b). State Density Bonus Law. Sacramento, CA: California Department of Housing and Community Development.
- California Department of Housing and Community Development. 1991(a). Housing Element Analysis: Preservation of Assisted Units. Sacramento, CA: California Department of Housing and Community Development.
- California Department of Housing and Community Development. 1991(b). Regional Housing Needs for Tri-County Area Planning Council, 1991-1997. Sacramento CA: California Department of Housing and Community Development.
- California Department of Finance. 1991. E-5 Reports.
- California Department of Finance. 1991. Interim Population Projections for California, 1990-2005. Sacramento, CA: California Department of Finance.
- California Employment Development Department. 1990. Annual Planning Information Tehama County. Sacramento, CA: California Employment Development Department.
- California State University, Chico, Center for Geographic Information, 1992.
- City of Napa General Plan Housing Element. 1991. Napa, CA: City of Napa Planning Department.
- City of Red Bluff Vacant Land Inventory. 1991. Red Bluff, CA: City of Red Bluff Community Development Department.
- Community Housing Improvement Program. 1990. City of Red Bluff Housing Condition Report. Chico, CA: Community Housing Improvement Program.
- Housing Condition Survey; Community Housing Improvement Program, 1990.

Murphy, Brian, Associates, Inc. 1991 May. City of Red Bluff 1991 Master Plan. San Ramon, CA: Brian Murphy Associates, Inc.

Office of Planning and Research. 1988. State of California Planning, Zoning and Development Laws. Sacramento, CA: Office of Planning and Research.

Office of Planning and Research. 1990. State of California General Plan Guidelines. Sacramento, CA: Office of Planning and Research.

Red Bluff General Plan Housing Element. 1983. Red Bluff, CA: City of Red Bluff Community Development Department.

Tehama Local Development Corporation. 1991 August. City of Red Bluff Downtown Revitalization Study. Red Bluff, CA: TLDC.

Tri-County Economic Development Corporation. 1991. Statistical Abstract, 1990-1991. Chico, CA: Tri-County Economic Development Corporation.

U.S. Bureau of the Census 1980, 1990.

Wright, Roberta, Activist for Disabled. Red Bluff, California.

Yamamoto, Alan, Tehama County Mental Health Department. Bluff, California.

APPENDIX E
PERSONS AND AGENCIES CONTACTED

Antone, Gary, City of Red Bluff Engineer. Red Bluff, California.

Gordon, Milt, Century West Development. Woodland, California.

Grey, Jean, Program Director Area Agency on Aging. Chico, California.

Hardy, Greg, Victory House Manager. Red Bluff, California.

Hartshorn, Doug, Tehama County Board of Realtors. Red Bluff, California.

Hayden, Chuck, Community Development Director. Red Bluff, California.

Hobart, Lu, Program Manager, Tehama County Community Action Agency. Red Bluff, California.

Johnson, Keith, Farmers Home Administration. Red Bluff, California.

Jones, Valerie C., Manager of Resource Development, Far Northern Regional Center. Red Bluff, California.

Meyers, Gene, Program Director, Tehama County Welfare Department. Red Bluff, California.

Michel, Imelda, Rural Self Help Coordinator, Community Housing Improvement Program. Chico, California.

Minch, John, Minch Property Management. Red Bluff, California.

Price, Susie, Community Development Coordinator, Community Housing Improvement Program. Chico, California.

Sandoval, Eric, Architect, Mercy Family Housing. Red Bluff, California.

Table 1-2

Development Fee and User Charge Comparison 1991

SERVICES	Red Bluff 1991		Red Bluff 1990		Redding 1990		Chico 1990	
	Develop- ment Fee, Dollars/SFU	User Charges, Dollars /Mo./SFU	Develop- ment Fee, Dollars/SFU	User Charges, Dollars /Mo./SFU	Develop- ment Fee, Dollars/SFU	User Charges, Dollars/ Mo./SFU	Develop- ment Fee, Dollars/SFU	User Charges, Dollars/ Mo./SFU
Water Supply & Distribution	1116.75	10.33	488.00	7.47	1700.00	8.30	0.00	15.95
Wastewater Collection	837.00	1.19	274.00	0.00	1715.00	0.00	2572.00	0.00
Wastewater Recycling	980.10	11.32	0.00	9.58	1075.00	9.58	952.00	4.50
Traffic Circulation	1050.00	2.20	0.00	0.00	800.00	0.00	1350.00	0.00
Flood Protection	246.75	0.00	0.00	0.00	0.00	0.00	2870.00	0.00
Subtotal Public Facilities	4230.60	25.04	762.00	17.05	5290.00	17.88	7744.00	20.45
Fire Protection	329.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Police Protection	283.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parks & Recreation	286.20	0.00	265.00	0.00	275.00	0.00	1189.00	0.00
City Administration	288.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal Community Service	1187.50	0.00	265.00	0.00	275.00	0.00	1189.00	0.00
TOTAL FEES AND CHARGES	5418.10	25.04	1027.00	17.05	5565.00	17.88	8933.00	20.45

SOURCE: Brian Murphy Associates.

Supplementary Document C

TIME PERIODS FOR REVIEW OF ENVIRONMENTAL DOCUMENTS

<i>Document or Action</i>	<i>Effect</i>	<i>Time Period</i>	<i>CEQA Guidelines</i>
Review of application for completeness.	If no determination is made within this period, it will be deemed complete.	30 days	15101
Lead Agency acceptance of a project as complete.	Begins maximum one year period to complete environmental review for certain projects.	1 year	15060
Initial Study.	Provides 30 days to determine whether an EIR or Neg Dec will be required.	30 days	15102
Notice of Preparation.	Provides 30 days from receipt of NOP for agencies to review and comment.	30 days	15103
Convening of Scope and Content meetings.	Requires a meeting requested by an agency or by the applicant to be convened within 30 days of the request.	30 days	15104
Public Review.	When an environmental document is submitted to the Clearinghouse, the public review period shall be at least as long as the review set by the Clearinghouse.	EIR: 30-90 days ND: 21 days to a "reasonable time."	15105
Review by State Agencies.	Provides standard 45 days for EIRs and standard 30 days for NDs.	EIR: 45 days ND: 30 days	15106
Completion of negative declaration.	For a private project, the Neg Dec must be completed in 105 days.	105 days	15107
Completion and certification of EIR.	For a private project, an EIR must be completed within one year. May be extended once for up to 90 days.	1 year	15108
Notice of Determination — filing.	Provides that the notice shall be filed within 5 days (local agencies only).	5 days	15094
Notice of Determination.	Filing starts a 180-day statute of limitations to court challenges to the approval of the project.	180 days	15094
Suspension of time limits.	Unreasonable delay of document preparation caused by the applicant allows suspension of time period in Guidelines, Sections 15107 and 15108.	varies	15109
Projects with federal involvement.	Time limits may be waived or superseded by federal time requirements.		15110

NOTE: Related time periods for project approval are contained in Chapter 4.5 of the Government Code beginning at Section 65920. These generally run concurrently with certain CEQA time periods.

RESOLUTION NO. 38-1993 (GPA-21)

GENERAL PLAN AMENDMENT NO. 21
ADOPT 1993 LAND USE AND NATURAL ENVIRONMENT ELEMENTS.

WHEREAS, Government Code beginning with Section 65300, specifies that Cities shall adopt and periodically update their General Plans; and

WHEREAS, the City of Red Bluff Planning Commission has conducted surveys and studies in connection with the updated Land Use and Natural Environment Elements of the General Plan of the City; and

WHEREAS, the Planning Commission did, after conducting public meetings and public hearings, recommend to the City Council the adoption of the updated Land Use and Natural Environment Elements, and approval of the related Mitigated Negative Declaration; and

WHEREAS, the City Council did hold public hearing on the updated General Plan Elements and the related Negative Declaration;

WHEREAS, the City Council did approve the related Negative Declaration on August 17, 1993 with the adoption of Resolution 25-1993;

NOW, THEREFORE BE IT RESOLVED that the City Council does hereby find that the updated General Plan Elements do conform to the provision of the Planning, Zoning and Development Law in the California Government Code Title 7 Division 1 beginning with Section 65000;

BE IT FURTHER RESOLVED that the City Council does hereby adopt the 1993 Land Use and Natural Environment Elements of the General Plan.

PASSED, APPROVED AND ADOPTED at a regular adjourned meeting of the City Council of the City of Red Bluff on November 16, 1993, by the following vote:

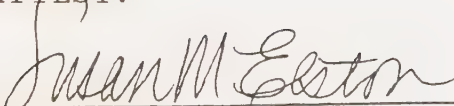
AYES: Councilmembers: Penne, Schoelen, Sale, Trujillo and Wintle.

NOES: None.

ABSENT OR NOT VOTING: None.


MAYOR

ATTEST:


CITY CLERK

This is to certify that the annexed document is a true and correct copy of the original on file in my office.

Attest: NOV 19 1993

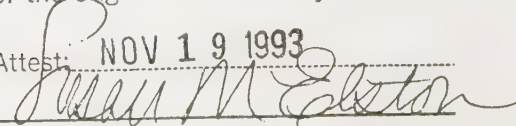

SUSAN M. ELSTON, City Clerk
City of Red Bluff
County of Tehama, State of California

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LAND USE ELEMENT

CITY OF RED BLUFF GENERAL PLAN

I. INTRODUCTION

A. Purpose of the Land Use Element

The Land Use element of a general plan is intended as the principal guideline for decisions about community growth. It is central to the plan and requires the greatest degree of relationship with the other six required elements. As succeeding elements of the plan are adopted or amended their relationship to the Land Use element must be assured through consistent policies, standards and locational parameters.

The Land Use element identifies the spatial arrangement of existing and proposed uses of the land including public lands and facilities. It lays out the distribution of classes of land use, the intensity of those uses and proposes a strategy of goals, objectives, policies and implementation measures to promote a wise use of land to promote the welfare of the community.

1. State Requirements

The authority for the Land Use element is found in California Government Code. Section 65300 requires every city and county to draw up and adopt "a comprehensive, long-term general plan for the physical development" of the community. The Land Use element is specifically defined by Government Code section 65302(a). The plan must include:

"...a land use element which designates the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land. The land use element shall include a statement of the standards of population density and building intensity recommended for the various districts and other territory covered by the plan. The land use element shall identify areas covered by the plan which are subject to flooding and shall be reviewed annually with respect to those areas."

2. The General Plan Process

The process of preparing, amending or updating a general plan includes a number of steps which insure an adequate and effective set of policies and standards to be applied in the land use decision making process. The steps given below should be applied to any review or modification of the general plan. This will serve to keep the plan current and active to coordinate the review of development proposals, public land or facility improvements and to facilitate the management of community resources and quality of life.

An eight step process recommended by the State of California, General Plan Guidelines includes the following steps: (See Planning Process Diagram in Appendix)

- Step 1 Identify Issues, Opportunities and Assumptions
- Step 2 Formulate Goals, Objectives
- Step 3 Collect and Analyse Data
- Step 4 Revise Goals and Objectives
- Step 5 Develop and Evaluate Alternative Plans
- Step 6 Select and Adopt the Preferred Plan
- Step 7 Implement the General Plan
- Step 8 Monitor and Amend the Plan
- Steps 1-8 Include Public Participation and Insure Government Coordination
- Steps 3-8 Coordinate with the Environmental Review Process

3. Consistency With Other Elements and Plans

Planning Law in California, embodied within Government Code Section 65000 et.seq., requires that general plans be internally consistent. No conflict should exist between the policies, textual or diagrammatic, within or between elements of the general plan. This requirement is specified in Government Code Section 65300.5.

Within element, or internal, consistency requires that data, analyses, goals, objectives, policies and implementation measures within the element must complement one another. Conflicts that arise between statements, data or diagrams must be resolved during and process of plan amendment or adoption.

Between elements there must be consistency in assumptions, proposals, goals, objectives, policies and data bases. Amendments of any one element must necessarily require appropriate revisions to portions of other elements which are affected.

Though not required specifically by Government Code it is highly recommended that goals, objectives, policies, data base and assumptions regarding growth be coordinated with the general plan of Tehama County. Land areas within the City Sphere-of-Influence and Planning Area are regulated by County planning regulations and policies. These may well be inconsistent with those of the City. An active effort should be made to insure consistency in policy regarding growth in these areas.

4. Goals, Objectives, Policies and Implementation Measures

Guidelines for community decision making for land use are embodied within the structure of adopted goals, objectives, policies and implementation measures. Each is a statement of a desirable community condition or approach to achieving that condition. Each should be used as a guideline for making decisions regarding land use questions.

A goal is an unquantified ideal future condition toward which the community works. It is an end which can probably not be achieved but which nevertheless is the ideal. An example might be; To Provide a Crime Free Community.

Objectives are measurable and expected outcomes. As these are achieved through time the community draws closer to its goals. *Objectives* are stated outcomes which may be achieved through expenditure of time, energy, resources or completion of programs, activities or governmental actions. An *objective* may be; Establish an Alternative, Safe Roadway Access from the Freeway to the Municipal Airport, or; Construct Noise Attenuation Devices along Residential Frontages with the SPRR, Freeway and State Highways.

Policies are statements which are used to guide decisions. They are to be considered wherever appropriate before making a recommendation, administrative or legislative decision regarding land use. These statements are stated in active speech to give wise counsel and continuity to decisions. They are adopted as the body of the general plan and its elements and represent the community consensus for the direction the community should follow. Should that course change, then policies within the plan should be changed to reflect new thinking. Otherwise, the plan may become inadequate, inconsistent and out of date and will not meet the requirements of State Planning, Zoning and Development Laws.

Implementation Measures are specific actions, programs, techniques or legislative initiatives (e.g. ordinances, plan adoption, etc.) which are meant to bring about change or a desired result. The measures are intended to carry out the plan, through the appropriate policy directions, and to achieve objectives set out by the community.

B. The Planning Area

The general plan of a community must consider all the land and facilities within its corporate boundaries as well as "any land outside its boundaries which in the planning agency's judgement bears any relation to its planning". (Government Code Section 65300) This area is one with which the City probably has strong economic and social interaction and which is probably reasonably contiguously developed though generally not provided with City services.

The planning area is extremely important to consider when making projections for urban service capacities, infrastructure improvements and local City accommodation for increased demands on central city roadways and other land and programs. The planning area is that extra-governmental territory within which the City should coordinate planning decisions with County administrators. This will improve the continuity of character of peripheral urban development and insure consistency of urban development standards for areas which may eventually become incorporated. Specific boundaries of the City of Red Bluff planning area are given on the Planning Area and City Sphere map. Generally, the boundaries of the planning area are as follows:

- North: The north edge of the 100 year floodplain of Blue Tent Creek from the Wilcox Road intersection southeast along the floodplain to a point 1/4 mile south of the Jelly's Ferry I-5 interchange, then southeast along the eastern side of the freeway and then east of the northeast 100 floodplain of Dibble Creek to the Sacramento River, across the Sacramento River where Adobe Road meets its 100 year floodplain, northeast to Fisher Road, east to Paynes Creek Road, south to St. Mary's Avenue, south to Stice Road and east to State Highway 36.
- East: The east edge of State Highway 36 from Stice Road to Tuscan Ave., then east to Salt Creek, south across Highway 99 along Salt Creek and thence to the grant line to a point 4000 feet south of Antelope Boulevard, west to Hoy Road, south to Gilmore Ranch Road, west to the northern extension of Olive and south to the east side of the Red Bluff Diversion Dam.
- South: The south edge of the 100 year floodplain of Red Bank Creek from the Red Bluff Diversion Dam to a point 1200 feet west of a southerly extension of Paskenta Road.

West: A line running parallel and 1200 feet west of Paskenta Road from Red Bank Creek to the south 100 year floodplain of Reeds Creek, west to a point 800 ft. west of Wilder Road, north to the channel of Brickyard Creek, east to a line running parallel and 1200 feet west of Baker Road, north along that line to a point 800 feet north of the Baker Road/Highway 36 intersection, northeast to the Southern Pacific Railroad right-of-way, north to the south edge of the Blue Tent Creek 100 year floodplain and across the floodplain to the point of origin.

C. The City Sphere-of-Influence

The City of Red Bluff sphere-of-influence represents "the probable ultimate physical boundaries and service area" of a jurisdiction. (California Government Code Section 56076) The sphere-of-influence extends beyond City jurisdiction along lines of transport and into areas most likely to be annexed and easily served by City services. The purpose of the sphere boundaries is to communicate to other jurisdictions and agencies that area within which the City has a long term interest in the nature of land use decisions and development standards with which it must eventually administer consistent with City policies and standards. In these areas the City may make proposals to County government for land use policy and zoning (pre-zoning).

The previous sphere-of-influence boundaries were aligned closely with the City limits. They were very conservative in foreseeing "ultimate physical boundaries and service area". The proposed sphere boundaries are more consistent with population growth projections, likely growth areas and expected extensions of city sewer and water services. (See Land Use Map, page 6) Generally, the boundaries are as follows:

North: The north edge of the 100 year floodplain of Blue Tent Creek to the east right-of-way of the Interstate 5 freeway, then south to the northeast edge of the 100 year floodplain of Dibble Creek, southeast and across the Sacramento River and then to the existing Sphere boundary north of Antelope Boulevard. There minor expansions of the Sphere boundary along the north and south margins of Antelope Boulevard.

East: Extend the Sphere boundary from previous terminus north and south of Antelope Boulevard to the east margin of the 100 year floodplain of the Salt Creek overflow (west branch), from the previous Sphere boundary at Wiltsey Rd. south along Philbrook Ave. to Sykes Ave, then west to Paynes Creek Slough, diagonally southwest to Williams Ave. and along the previous Sphere boundary following Williams Avenue, the City limits boundary to Sale Lane and south to Gilmore Ranch Road, then west to the edge of the Freeway, south to the west bank of the Sacramento River and southeast to the southeast edge of the 100 year floodplain of Red Bank Creek.

South: The south edge of the 100 year floodplain of Red Bank Creek from the Sacramento River to a point west of the junction of Rawson and Pimentel Roads then west to a point 500 feet west of the southerly extension of Paskenta Road.

West: North along a line 500 feet west of Paskenta Road to the south edge of the 100 year floodplain of Reeds Creek, then west to Wilder Road, north to Minch Road, east to the City limit boundary, then north and east along that boundary to Baker Road, then north, west and north along the City Limit continuing north along the west edge of Baker Road to Beegum Road (Highway 36) then northeast to the west margin of the Southern Pacific Railroad right-of-way and north to a point where the south margin of the 100 year floodplain of Blue Tent Creek meets the SPRR right-of-way,

northeast across the floodplain to its northeast edge to complete the Sphere boundary.



City of Red Bluff

Land Use

- Key
- Planning Area
 - ~~~~~ Sphere of Influence
 - - - - Floodplain
 - Greenway





D. Goals, Objectives and Policies for Land Use and Growth

GOALS, OBJECTIVES, AND POLICIES

I GOAL: COMMUNITY ENVIRONMENT

Conserve and improve groundwater, natural habitat, mineral, aesthetic, soil and air resources in the Red Bluff planning area.

Objectives:

- A. Discourage further development on prime agricultural soils, and within riparian habitat and wetlands.
- B. Encourage urban creek restoration
- C. Discourage development that does not incorporate physical land features into the project design.
- D. Encourage planting, preservation and replacement of native trees.

II GOAL: COMMUNITY CHARTER AND AESTHETICS

Conserve and improve community historic, residential neighborhood, public commons and traditional business sites and environments.

Objectives:

- A. Promote and maintain pleasing and positive physical appearance for the community.
- B. Adopt and enforce architectural review guidelines and sign aesthetics standards.
- C. Abate deteriorated buildings.
- D. Encourage maintenance of vacant buildings and landscape vegetation on developed sites.
- E. Discourage long term outside storage of debris and waste, and material and products not on display for sale.

IMPLEMENTATION MEASURES

- A. Adopt and Enforce Architectural Review Guidelines.
- B. Adopt and Enforce a Sign Ordinance.
- C. Adopt and Enforce an Aesthetics Ordinance and Guidelines.

III GOAL: COMMUNITY GROWTH AND ANNEXATION

New Growth and development within the community planning area should be consistent with community service capacity, environmental resource constraints, general plan designations, adopted City regulations and standards, a negotiated City/County land use strategy and City annexation plans.

Objectives

- A. Provide and maintain rural and urban services and facilities of high quality for adequate health, safety and comfort; and educational, cultural and recreational facilities for public benefits and enjoyment.
- B. Expand the Sphere of Influence where appropriate to reflect realistic growth frontiers.
- C. Engage in Pro-Active City/County Land Use Planning and joint policy formulation for areas where plan conflicts exist.
- D. Promote infill development through incentives to manage community land use balance and increase efficiency of service delivery.
- E. Adopt policies, programs and fees that will assure City approval of projects includes conditions that mitigate impacts attributable to that project.
- F. All new residential subdivisions, commercial or industrial land development within the City plan area shall be contingent upon City services including sewer, water and emergency vehicle access.
- G. Discourage minimum lot size (1990 Standards) development in woodland foothills north of Dibble Creek unless clustering is incorporated into the project design and construction.
- H. Direct residential development, under careful site and project design to areas south of Kimball Road, west outside creek floodways and riparian habitat; and to the north, west of the freeway.
- I. Discourage residential development adjacent to the freeways, railroads, arterial streets and the airport.
- J. Tie capital investment in City services to growth and annexation objectives.
- K. Discourage planning, zoning, or development proposals which result in adjacent conflicting land uses.
- L. Adopt and promote development standards and policies that will mitigate negative impacts resulting from development near Land Use Classification boundaries.
- M. Discourage further development on prime agricultural soils and in areas no served by sanitary sewers.

IV GOAL: INDUSTRIAL DEVELOPMENT

Promote industrial expansion within and adjacent to existing industrial parks and zones where infrastructure is presently available and access where minimum community disruption can be assured.

Objectives

- A. Phase appropriate future industrial development to the area south of the municipal airport.
- B. Direct heavy truck and rail oriented industrial development to the freeway/Montgomery Road interchange area.
- C. Limit the negative effects of rail traffic through the community.
- D. Discourage residential or other noise sensitive development on land subject to excessive noise resulting from airport, railroad, or industrial related activities.

(revised 11-16-93)

V GOAL: CENTRAL BUSINESS DEVELOPMENT

Reinforce central business locational advantages and promote the central City as the community business focus.

Objectives:

- A. Promote lot assembly and marketing.
- B. Require design review of construction and rehabilitated buildings.
- C. Undertake "Main Street" development programs.
- D. Investigate the scope of Central Business District parking problems and potential solutions.

VI GOAL: SOLID WASTE MANAGEMENT

Manage the treatment, reuse, removal and disposal of all solid waste generated within the City of Red Bluff.

Objectives:

- A. Establish domestic waste recycling programs.
- B. Require industry participation in waste treatment and recycling efforts.
- C. Develop a strategy to plan for long term land disposal of solid and hazardous waste.

V. See also the Policies Appendix beginning on page 55.

II. LAND USE CLASSIFICATION AND EXISTING LAND USE DISTRIBUTION

A. Land Use Classifications

All land uses within the City are classified by type and are defined by intensity and density standards. The land use classifications, or designations, must be consistent with zoning district classifications and hopefully consistent with actual existing land uses. Land use classifications in Red Bluff are given below. Each classification may include several intensities (different levels of concentration or intensity of use) and densities, or numbers of units or equivalent persons per acre. The location of land use designations are given on the Land Use map.

R-L Residential - Low Density

Residential - Low Density is a classification intended for the lowest density residential areas of the City which are served by water, sewer and other services. They are a contiguous part of the built-up area and include such allowable uses as one and two family buildings, agriculture, care homes, home occupations, non-profit organizations and flea market activities. Allowable unit densities are no more than 10 dwelling units per gross buildable acre. Consistent zoning includes R-1 and R-2 zoning districts. (See page 14)

R-M Residential - Medium Density

The medium density residential classification is intended to designate areas of the City in which multiple family housing will be permitted by right. These areas are more efficiently served by City services. Allowable unit densities may not exceed 20 dwellings per gross acre.

Consistent zoning includes R-3 and R-4 districts.

(See page 14)

2. Commercial

C Commercial

The commercial land use classification applies to all areas in the City in which commercial establishments are permitted as a right. They are located in neighborhoods at a smaller scale and with limited ranges of goods and services, in the central business district with a wider range of specialized functions and are located at principal transport access points or satellite business concentrations where volume and sale of special purpose goods and services are offered.

Consistent zoning districts include C-1

(Neighborhood), C-2 (Central) and C-3 (General) regulations. (See also page 15)

3. Industrial

I Industrial

Land uses which include product fabrication, processing or the sale or storage of bulk, hazardous or unfinished materials or industrial equipment are classified as industrial. These uses have the potential to generate nuisance and should be separated from residential classed areas by commercial or open space buffers or appropriate barriers or screening. The uses are generally located along principal transport corridors, airport locations or in isolated rural locations.

Consistent zoning districts include M-1 (Light), M-2 (General) and M-L (Limited) regulations. (See also page 16)

4. Public

PS Public Service

The public service classification is reserved for publicly owned lands which provide utility, safety, government, business or educational services, open space, recreation, or protection of community resources. These are located near important service points or with appropriate access to public need. Consistent zoning includes the P-A and A V districts.

5. Overlay Land Use Districts

G. Greenway

The Greenway overlay district is intended to apply standards for river and flood corridor conservation throughout the City. Standards for land cover, drainage and grading are imposed to protect the native riparian corridors that course through the planning area namely, the Sacramento River and Red Bank, Grasshopper, Reed's, Brickyard, Brewery, Dibble and Blue Tent Creeks and their wooded tributaries. Along these corridors a continuous strip of native oak woodland remains. whatever zoning district has been historically imposed the effect of the overlay district will be to protect wildlife habitat, tree cover, minimize erosion, and limit the effects of flood and fire hazard. It will also insure the maintenance of scenic corridors and potential community recreation resources.

The provisions of the Greenway overlay district shall supplement and/or supersede those of any zoning district over which it is superimposed. (See Greenway overlay to Land Use Map, page 13, and Land Development Guidelines in Policies Appendix)

F. Floodplain

The floodplain overlay district is the mapped boundaries of the 100 year floodplain as defined by the National Flood Insurance Program of the Federal Emergency Management Agency (FEMA) or consultant designation on the land use map. All areas mapped within Zone A on FEMA flood hazard boundary maps should experience flooding at least once within a one hundred year period, averaged over the long-term. (See 100 year floodplain map on page 13)

Flood hazard areas are most prevalent within the Sacramento River floodplain along a corridor 1-2 miles wide to the east of downtown Red Bluff and to the south and north of the City, east of the I-5 freeway. The 100 year floodplain is approximately 2000 feet wide along Red Bank Creek, 1000 feet wide along Grasshopper, Dibble and Blue Tent Creeks and 100 to 500 feet wide along Reed's, Brickyard and Brewery Creeks. The effect of the Floodway overlay designation will be to limit or condition any use of land within the zones. For purposes of maintaining public safety the interim City Land Development Policies and City Grading, Drainage and Ground Cover Policies will be implemented within these zones.

The provisions of the Floodplain overlay district in the Land Development Guidelines will supplement and/or supersede those of any zoning district over which it is superimposed.

NOTE: A FW (Floodway) overlay is established in the 1993 Safety Element. Due to the flood hazards that exist in those areas use, development and alterations within floodways is severely restricted.

H. Hillslope

On hillsides exceeding 20 (see also page 57) percent slope no grading or land development improvements will be permitted except by special use permit.

6. Planned Development Standards and Other Overlay Zoning Districts

- PD** **Planned Development** (Planned Development Use Permit)
Planned Development Districts are conditions or regulations rather than district boundaries on a Zoning Map with accompanying Zoning Standards Planned Development may be applied to residential, commercial or industrial zones to supplement applicable zoning district requirements. They are intended to introduce flexibility and creative design within proposed projects. These planned developments, involving the careful application of design, are encouraged to achieve a more functional, aesthetically pleasing and harmonious living environment within the City. (Chapter 25, City Code)
The PD use permit regulations are a type of "floating" district, the conditions of which may be superimposed on most zoning districts.
- AZ** **Approach Zone**
Densities for residential land within the Red Bluff Municipal Airport Approach Zones will be limited to 3.5 units per acre. Further restrictions are included in the Comprehensive Airport Land Use Plan adopted by the Tehama County Airport Land Use Commission. .
- CZ** **Clear Zone**
The Clear Zone overlay extends 1300 feet in a widening segment from the ends of the principal runway of the municipal airport. As discussed in the Comprehensive Airport Land Use Plan, all development within the Clear Zone is strictly limited. The overlay supersedes all underlying zoning districts.
- N** **Noise**
Standards for development in areas of excessive noise propagation may be found in the Land Development Guidelines, the Comprehensive Airport Master Plan and in the Noise element of the Red Bluff General Plan.
- A** **Agricultural Overlay Zone**
- F** **Highway Overlay Zone Frontage**
- MHCA** **Mobile Home Common Area**

The regulations of the combining districts above are additive to any district with which they are combined. They increase the requirements for a particular zone where local conditions require special concern in the public interest.

FLOODPLAIN AND GREENWAY
OVERLAY MAP

SEE PAGE 6

B. Land Use Distribution and Density

The distribution of existing residential densities follows closely the pattern of land use designations on the plan diagram, the City zoning map and on the map of existing land uses. The location and densities of residential land is as follows:

1. Low Density Residential Land

a. DENSITIES:

Low Density Residential (1-10 units per acre or 2.47-24.7 persons per gross buildable acre @ 2.47 persons per household unit)

Low density land uses include single family and duplex residential districts. Allowable densities are 10 units per gross acre or less. Ten families per acre equals about 24.7 persons per acre at 1990 census average household size. This land use class will generate 100 vehicle trips per day per gross acre of land.

Densities of 10 units per acre are comprised almost completely of single family housing. Duplex lots make up about 3 percent of the lots in this class or just over 100 units. (See Appendix Figure 2)

Single family, single lot residential development accounts for 3175 units in the City. (U.S. Census, 1990) These units make up 63% of the 5062 housing units within the City (1990 Census). The 2245 acres of single family and duplex lots are 80% of all residential acreage (Table 1-B, page 18).

b. DISTRIBUTION:

Low density residential land is distributed uniformly north, west and south of the central City. Very few scattered low density settlements are found within the City east of the Sacramento River.

Low density residential uses were built at the center of town during Red Bluff's early history and always at the edge of town progressively farther from the center as the city grew. Competing commercial, industrial and other land activities appeared within the residential areas at economic and accessible locations and very often replaced the older single family residences. The resulting low density residential land distribution is widespread. More uniform, expansive tracts appear all around the periphery at the least accessible locations and at the greatest travel distances from principal destinations. Mixed low density residential and other uses are found in older developed areas of the town. It is in these more central areas that most conflicts are created between once quiet neighborhoods and the increasing nuisances and hazards of more intensive land uses. Policies are included in the plan to minimize the conflicts that may be created by land use changes in more central city locations.

2. Medium Density Residential Land

a. DENSITIES:

Medium Density Residential (10.1-20 units per acre or 25-49 persons per acre @ 2.47 persons per occupied household unit)

Densities over 10 units per acre are comprised of apartment or condominium developments on relatively large parcels. However, many single lot complexes occur. Developments with 4 or more units per lot make up virtually all medium density residential areas. In 1990 there were over 233 such lot locations in the city. (Appendix, Figure 2) These lots make up about 20% of all residential acreage (Table 1-B, page 18)

b. DISTRIBUTION:

Medium density housing is distributed with little pattern across the City. The Existing Land Use Map indicates the largest of these complexes to be along south Sale Lane, east of the Sacramento River along Lakeside Drive and Gilmore Road, along the south bank of Reeds Creek near the Sacramento River (manufactured homes), and at many scattered locations along Walnut Street, South Jackson St., along Luther and Kimball Roads, Dephinium Court, David Avenue and in the Franzel Road and Deborah Drive areas.

Small lot medium density development, with few units in each, are found scattered predominantly in the central city and immediately north and west of it in what are the older residential areas of the town.

Land which is designated and zoned medium density residential is located in generally central locations of the City. Medium density residence permits up to twenty units per acre, equalling up to 20 families, or 49.4 persons per acre (@ 2.47 persons per family. (Source: 1990 U.S. Census) Vehicle trip generation is up to 10 trips per household per day or 200 trips per day per acre in this land use class. (See trip generation estimates in the Circulation Element.)

Central or high access locations are best for medium density housing. Also, higher density uses are also favored next to public grounds to provide maximum public access to recreation and open space. All these locations minimize vehicle trips, travel time, roadway congestion and vehicular emissions.

In Red Bluff medium density zoning districts are presently located to the west of the downtown and east of the public High School and north of Oak Hill cemetery. They are also found along and on both sides of the Sacramento River. Medium density districts in outlying areas are located near principal arterials, schools and shopping districts. They are found south of downtown, east of the airport and South Jackson Street, near the new Red Bluff shopping Plaza, east of town in the Antelope corridor, west of town, along Walnut Street and north of town between the Wilcox Oaks golf club and commercial districts.

3. Commercial Land

Commercial land varies in form, function, location and intensity with its period of development, its accessibility to a particular consumer market and with its peculiar locational economics. In Red Bluff this land, approximately 16% of the city (Table 1-B, page 18), is located in these definable situations. The largest and most diverse concentration of commercial land is located in the central city. The forces of an historically compact city made central location very desirable. As the city grew, the attraction of lower priced highway frontage and vacant land in the town's periphery allowed the spread of this activity.

Roadway corridors and their high accessibility/visibility encouraged the first spreading along Antelope Boulevard to the east, Walnut to the west and Main St. to the north. Alignment of the Interstate 5 freeway enhanced the locational advantages of the Antelope Blvd., South Main St. and Highway 36 interchanges and stimulated commercial development at the first two of these. Large scale development to the south of the city center has encouraged siting of commercial activities along South Main Street

(due in part to large tract availability and lower site costs not available in the City center). Also, proposed commercial development will serve more remote suburban development along South Jackson and north on Wilcox Rd.

Commercial land use designations and zoning reflect the real need for commercial development in response to the above economic principles. Commercial policies in the plan promote the anticipation of future commercial land use needs, promote the concentration of such land uses in appropriate locations, discourage unnecessary proliferation of those uses into low density residential areas and promote redevelopment of commercial activity in the central city.

4. Industrial Land

The historical location of industrial activities in Red Bluff were closely associated with the location of the Southern Pacific railroad alignment and old highway 99 West. This is particularly true of the forestry products industries on the south side of the city and small scale manufacturing and warehousing along the railroad and Monroe Street along and just west of the central city corridor. Mixed industrial uses later located along the north alignment of the railroad, at the west edge of the city northwest of the Walnut St. and Baker Rd. intersection and most recently with the designation of an industrial park adjacent to the municipal airport.

The general plan affirms the need for industrial activities in the city. Proposed designations of land for this purpose is influenced by three considerations. The first is that industrial activities are encouraged at locations where high freeway, railroad and airport access make it a desirable use of land. This presumes the ability to minimize the nuisances and hazards that may affect residential areas. The second consideration is the uncertainty of the future strength of the forest products industry in the region. The designation for future use of large tracts of wood products industry land may be questioned. The City must consider alternatives in the long-term economic interest of the community. The third consideration is the generally undesirable nuisance and safety concerns of railroad linked uses through the center of the community. Policies will generally encourage a transition to lower intensity land uses.

5. Public Land

Public land use activities are distributed throughout the community in a pattern determined by their function. Public administrative offices and services are generally centrally located for high public accessibility. Public utilities and disposal sites are generally peripheral to the City because of engineering requirements and nuisance characteristics. The municipal airport and adjacent reserved open space represents a need for locational removal from high use residential activities.

Public schools and public open spaces are located at generally regular intervals to provide for neighborhood access. Higher level education or large scale open space sites depend more on site qualities (adequate space or ideal site environments along the Sacramento River). (Existing public land use is illustrated on the Land Use map.)

Community growth will create demands for additional space and facilities. Planning for these spaces is ongoing by appropriate departments of the City government. (See proposed land use section, III-B) The land use planning process is especially important for conservation of open space for future public needs. The

Conservation/Open Space element of the general plan provides special reference to open space needs.

6. Floodplains

The Land Use Map designation for floodplains indicates all corridors along principal streams in Red Bluff which flood beyond their annual floodway channels.

The 100 year floodplain boundaries have been transferred to the Land Use Map from Flood Insurance Rate Maps (FIRM) prepared by the Federal Emergency Management Agency ((FEMA)(Where the flood plain boundary is not indicated on the F.I.R.M. an estimated boundary is noted). The boundaries indicate the calculated extent of a flood event expected at least once every 100 years. Floodplain designations are indicated for portions of the Sacramento River, sloughs, and Red Bank, Grasshopper, Reed's, Brickyard, Brewery, Dibble and Blue Tent Creeks which flow through the City of Red Bluff.

The land use element includes policies governing the use of land in floodplains. They guide decisions and provide constraints for property improvements and human habitation in these flood hazard zones.

C. Land Use Acreages

A land use survey was prepared for the City of Red Bluff. Existing parcel development and vacant areas were mapped for the period 1990-1991. The map reflects the acreage totals given below. It is displayed in the City Community Development Department.

Table 1-A

1985 Land Use Acreages*

Developed Land	1985 (acres)	(Percent)
Single Family Residential	722	18.19
Multi-Family Residential	105	2.6
Commercial	254.48	6.4
Light Industrial	69	1.7
Heavy Industrial	78.04	1.96
Industrial Park	39	1.0
Airport	511.54	13.0
Recreational	81.42	2.0
Schools	109.68	2.8
Public Land(City/County)	792.29	20.0
Public Land(State)	6.67	.17

Vacant Land (by Zoning Class)

Single Family Residential	1,052.32	26.5
Multi-Family Residential	264.9	6.7
Commercial	116.11	2.9
Light Industrial	48	1.2
Heavy Industrial	65.86	1.65
Industrial Park	40	1.0
Recreational	35.31	.8

TOTAL for CITY 3,968 100.0%
(6.2 sq. miles)

(Totals do not sum to 100% because airport and recreational lands are included in publically owned city lands.)

*Source: 1985 City of Red Bluff, Local Data Profile

Table 1-B

1992 Land Use Acreages*

Zoning District	Vacant Acres	Developed Acres	Total Acres	Total Sq. Miles	Percent %
R-1	920	1,239	2,159		
R-2	55	31	86		
R-3	28	250	278		
R-4	<u>252</u>	<u>95</u>	<u>347</u>		
Residential Subtotal:	1,255	1,615	2,870	4.484	59.6%
C-1			31		
C-2			210		
C-3			<u>542</u>		
Commercial Subtotal:	172	611	783	1.223	16.3%
M-1			231		
M-2			231		
M-L			5		
P-I			<u>91</u>		
Industrial Subtotal:	139	417	558	0.872	11.6%
A-V & PA			604	0.944	12.5%
TOTAL for CITY	1,566	2,643	4,815	7.52	100%

*Source: 1992 CSU, GIS Survey and Vacant Land Map

Table 1-C

1985, 1990 & 1992 Dwelling Units

	1985*	(85% of Pop.)	1990**	1992**
Single Family Units	3,166	68.00%	3,175	3,575
Condominiums	36	.48%		
Duplexes	14	.28%		
Multi-Unit Apartments	1,490	30.00%	1,557	1,614
Other	<u>4 (1)</u>	<u>1.20%</u>	<u>330 (2)</u>	
TOTAL for CITY	4,838		5,062	5,189

* Source: 1985 City of Red Bluff, Local Data Profile

** Source: U.S. Census Bureau and State of California, Dept. of Finance

(1) Group Homes

(2) Mobile Homes, Trailers, other

D. Effects of Regional Transportation Access on Local Land Use

1. The Interstate Highway (5)

The effect of the State freeway through Red Bluff has been to increase access of the City to external markets and regional highway movements. The freeway improves the locational advantages of Red Bluff for economic development opportunities.

The local effects of the freeway have been to improve the value and opportunity for industrial and commercial land uses at the principal freeway access points in the City. The freeway access east of Kimball Road in the south and Antelope Boulevard east of town center have stimulated development of this type.

The access at Antelope has influenced the highway oriented commercial development there. The area within the City limits is almost fully built and with the constraints of the Sacramento River and its floodplain (e.g. prime agricultural land) little vacant land remains for future development.

The S. Main Street freeway access, east of Kimball Road, is the principal access to south Red Bluff, it's industrial zones, including the municipal airport and industrial park to the west, and to the shopping centers on South Main Street. This freeway access, and the Diamond Ave. access on the east side of the freeway serve a great deal of the city's economic activity and an extensive area of vacant industrial, commercial and residential land. Vacant commercial land between South Main St. and the freeway and the possibility for alternative uses of existing industrial land have increased the potential for future growth and development here.

Two other freeway access points provide northern city limit connections with Wilcox Road and with Main Street. The effects of these on local land use is minimal at this time. Their remote location serves local traffic and at Main St. a more direct connection to the northern districts of the City. Land use development potential in the near future is limited. However, should a freeway interchange be constructed at Adobe Road development potential would increase substantially. The area in the vicinity of the Main St. access (limited to south-bound off ramp and north-bound on ramp) and the area adjacent to the Wilcox Oaks golf and residential area, at Wilcox Road, are both largely vacant and are generally suited to residential and commercial use.

2. The Southern Pacific Railroad

The SP Railroad has always been an important element in the area economy. Rail access has enabled the historic growth of the lumber industry, once the principal employment base in the area. Today the railroad continues to serve this economy but in a much diminished capacity. Mill production is greatly reduced and is unlikely to ever return to its original scale or local importance.

The SP Railroad is principally a routing corridor through Red Bluff. It's right-of-way bisects the community and introduces something of an inconvenience to the circulation system and a nuisance to the visual and acoustic environment. The right-of-way disturbs the central city environment and has left remnant land uses, such as vacant warehouses, storage buildings and commercial and industrial structures and vacant land sites. These sites have little value for conversion due to the low demand for rail services and the high nuisance of the railroad location.

Current land uses along the SP line are negatively influenced by noise, vibration, visual aesthetics and limited access. Development of these sites will depend upon the ability to mitigate those negative effects and restore value to the affected sites.

3. The Municipal Airport

The 280 acre municipal airport is an important transportation asset to the community. It's location southwest of the City and just adjacent to the urbanizing fringe provides excellent open space resources and has excellent land development opportunities. The promotion of industrial site development in the airport industrial park is a principal direction for an appropriate City economic development policy. It offers the foremost opportunities for high value, high technology, industrial development in the community.

However, airport connections with the freeway, 1 1/2 miles to the east, are marginal and there is no rail access. Principal issues that remain to be resolved which affect land use development are, 1) improved, non-residential corridor access to the freeway and 2) development regulation in approach and overflight areas around the airport. The airport land use plan will provide some solutions to the latter problem.

E. Vacant Land

There are 1566 acres of vacant (or undeveloped) land in the City of Red Bluff. This represents about 33% of the City area. The distribution of this vacant land is largely in the categories of single family R-1 zoned land (920 acres) and multiple family R-2, R-3 zoned land (335 acres). The next largest category is commercial zoned land with 172 acres. (See Table 1-B, page 18)

Vacant lands are distributed by area largely to the north and south ends of the City limits. To the north most of the land is found in the 572 acre Wilcox-Oaks complex of districts including single family, mobile home, commercial and industrial zones. To the south the largest single tract (approximately 320 acres) is within the municipal airport district intended for airport related commercial and industrial uses. To the east between South Jackson and Montgomery Rd. two single and multifamily zoned tracts account for almost 200 acres and along Montgomery about 40 acres of industrial land. The remaining vacant land is generally zoned low density residential and is found in the area south of Luther Rd. (about 50 acres), adjacent to the north section of Monroe Ave. (about 175 acres) and in the area adjacent to and east of Baker Rd. (about 160 acres). (See Land Use and Vacant Land Map) Smaller tracts of vacant land are scattered throughout the City.

F. Natural Resource Areas, Floodplains and Other Resource Areas

Natural resources in the Red Bluff area are reviewed in the Conservation and Open Space elements of the General Plan. For consistency they are referred to here and within the Land Use Policies.

1. Biotic Resources

The principal biotic resources of Red Bluff are natural vegetative tree and ground cover and the plant and animal life which inhabits that tree and ground cover and the rivers and creeks which flow through the town. These natural biotic resources survive in greenway corridors which are belted along the Sacramento River and its tributaries flowing through Red Bluff including: Blue Tent Creek, Dibble Creek, Brewery Creek, Brickyard Creek, Reeds Creek, Grasshopper Creek and Red Bank Creek and their tributaries.

The floodplains, banks and hillsides adjacent to these waterways have high water tables and soil moisture content. This supports natural associations of Oak and scrub vegetation and an intricate network of plant and animal species which are interdependent as sources of food and shelter (cover). These are

ecologic habitats, the elements of which should be protected by leaving them as much as possible in their natural states. The greenway corridors are fragile and sensitive to fire, erosion, water depletion and habitat destruction by excessive human use. By excluding unnecessary development from these corridors they will remain a permanent biotic resource which is very important to the small town and rural character of the City.

Floodplains, designated as the 100 year floodplain by the Federal Emergency Management Agency (FEMA), are an important resource. They are a critical basin to receive, hold and slowly release the short term run-off from heavy rainstorms. These basins must be maintained and protected from encroachment by development. Their filling, channelizing or modification simply increases flood potential along other parts of the floodplain or diverts scouring and erosive forces to adjacent or downstream banks.

Floodplains and the adjacent belt of woodland (Greenways) are also the zone of highest native vegetation growth. Natural vegetation systems within the floodplain are an important natural erosion control system and the only natural habitat for animal life that remains in the City. (See Greenway and floodplain map)

Within the floodplain is the floodway. It is generally devoid of vegetation except for grasses and small shrubs. It is the annual zone of flooding. The floodways in Red Bank, Reeds and Dibble Creeks are characterized by annual deposition of sand, gravel and rock. As they approach confluence with the Sacramento River their gradients are so low that sediment carried from the foothills to the west are dropped in the flood channel.

2. Mineral Resources

The principal floodways of Red Bluff are a principal mineral resource for aggregate mining. Sand, gravel and rock for construction are easily removed and with conditions placed on operations little damage may be done to floodplain habitats or down stream water quality. These resource zones will be zoned for industrial use but with strictly imposed conditions for operation by the City and by the requirements of the Federal Surface Mining and Reclamation Act.

3. Agricultural Resources

Tracts of prime agricultural land occupy a portion of the City to the northeast, adjacent to the freeway and the Sacramento River. No other area of the City to the north, west or south possess such resources and it is not the policy of the City to annex agricultural lands to the east of the Sacramento River. Agricultural resource lands currently within the City are intended for development as for more intensive uses. Due to their small scale and unimportance directly for the City of Red Bluff they will not be included in it resources policies. The plan should, however, be attentive to the policies for farmland preservation presented in the Tehama County General Plan.

4. Aesthetic Resources

The principal natural aesthetic resources of the City lie in its river and creek corridors, oak woodland and chaparral covered hills. These provide an open space resource for visual enjoyment and recreational pursuits and are essential to maintain the rural, open and small town character of the community.

Urban trees and tree landscaping programs in residential, commercial, urban stream and industrial areas are important to restoring the historic wooded and small town scale aesthetics in the City. These objectives will be supported by tree planting and preservation ordinances.

III. EXISTING AND PROJECTED POPULATION AND DEVELOPMENT

A. Existing and Projected Population

1. Historic and Existing Population and Present Household Characteristics

An accurate record of annual population has been maintained by the City Community Development Department. The source of population levels include the U.S. Bureau of Census for 10 year interval census of population, special local census counts supervised by the State of California and annual estimates provided by the State Department of Finance, Population Research Unit. Those figures are shown below in Table 2 for each year figures were available and are shown in Figure 3 for every 10 year period since 1970.

Table 2

<u>Year</u>	<u>Population</u>	
1880	2160	
1890	2680	
1900	2750	
1908	3501	(Ord. 120)
1910	3530	
1920	3104	
1930	3517	
1940	3828	
1948	4735	(Special Census)
1950	4905	
1955	5553	(Special Census)
1959	7130	(Est.)
1960	7202	
1962	7500	(Est.)
1964	7700	(Est.)
1966	7950	(Special)
1967	7975	(Est.)
1970	7606	
		<u>10 Year Increase Rate</u>
		5.6

			<u>Annual Percent Increase</u>	
1972	7850	(Est.)	1.6	
1973	8075	(Est.)	2.9	
1974	8099	(Est.)	0.3	
1975	8317	(Special)	2.7	
1976	8400	(Est.)	1.0	
1977	8500	(Est.)	1.2	
1978	8933	(Est.)	5.1	
1980	9650	(9490)*	3.1	24.8
1981	9708*		2.4	
1982	10081*		6.2	
1983	10435*		3.5	
1984	10721*		2.7	
1985	11014*		2.5	
1986	11087*		0.7	
1987	11535*		4.0	
1988	11783*		2.1	
1989	12078*		2.6	
1990	12363	(1990 Census)	3.0	30.3
1991	12650*	(est.)	2.3	
1992	12850*		1.6	

* Subsequent revisions to population provided by the State Population Research Unit

Selected preliminary results of the 1990 U.S. Census of Population are presented here for use in the Land Use and other elements of the plan for policy and population density assessments. These figures are taken from the U.S. Census publication Summary Population and Housing Characteristics. These statistics are given in Table 3 below.

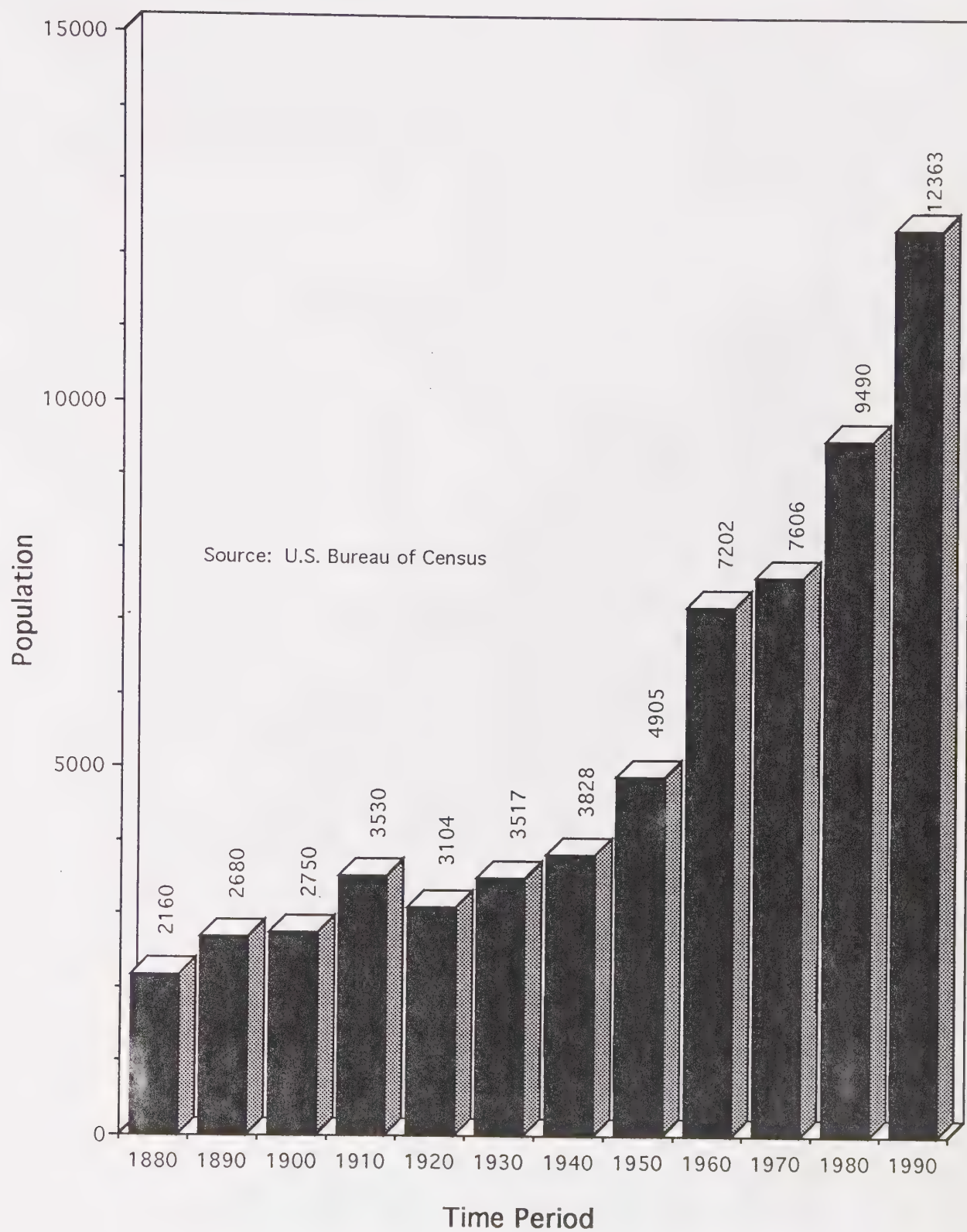
Table 3

City of Red Bluff
Preliminary Population Characteristics (1990 U.S. Census)

<u>Population</u> <u>Age Group</u>	<u>Number of Persons</u>	<u>Sex Ratio</u>
		Number of Males 5855
		Number of Females 6508
0 - 4 years	1121	
5 - 15	2076	
16 - 17	320	<u>Social Structure</u>
18 - 20	489	
21 - 24	694	European Ancestry 11,277
25 - 44	3705	Minority* 1,086
45 - 54	1019	* (includes Black, American Indian,
55 - 59	453	Asian and other groups)
60 - 64	467	
65 - 74	1063	
75 - 84	675	
85 & above	281	
Total	12,363	

Figure 3

RED BLUFF HISTORICAL POPULATION GROWTH



2. Population Base and Assumptions

Population base figures are taken from the U.S. Bureau of Census for 1970, 1980 and 1990 and those for intervening periods prepared by the California Department of Finance. Census tracts 5,6, and 7 in 1990 are the basis for total urban area population data and for 1970 and 1980 enumeration districts 643, 644 and 646 were added to City population figures.

The unincorporated area population of Red Bluff is located principally north and south of Antelope Boulevard. Its size has increased from 2,125 to 4,483 from 1970 to the present. The unincorporated, peripheral urban population was approximately 22% of the urban population in 1970, 28% in 1980 and 27% in 1990. (See Table 4 and Figure 4)

Table 4

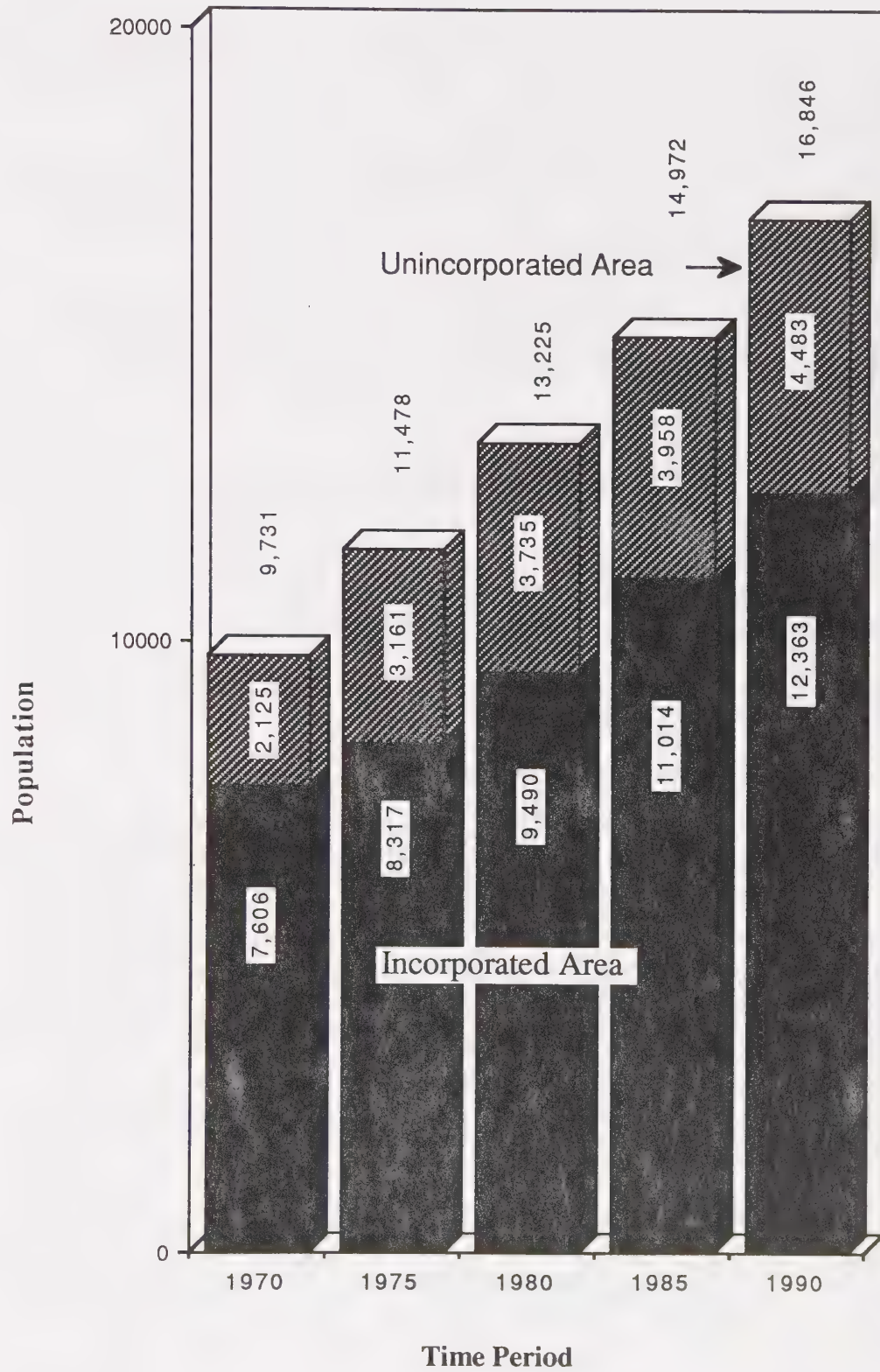
Red Bluff Planning Area Population

<u>Year</u>	<u>City</u>	<u>County(est.)</u>	<u>Total</u>
1970	7,606	2,125	9,731
1975	8,317	3,161	11,478
1980	9,490	3,735	13,225
1985	11,014	3,958	14,972
1990	12,363	4,483	16,846
1991	12,647		
1992	12,851		

Source: U.S. Bureau of Census and California Department of Finance

Figure 4

RED BLUFF AREA POPULATION GROWTH **



** Red Bluff Planning Area (See Table 4, Page 25)

3. Projected Population

Population projections are compiled for the City of Red Bluff and for the greater urban area, including unincorporated Tehama County, for the 10 year period 1991-2000. Forecasts are based upon certain assumptions. The first is that trends of population growth which have occurred during the past 20 years will continue over the next 10 years. Inherent in the first assumption is the second, that those economic and social forces which have been operating during the past 20 years will continue. The presumption is that economic growth, following the current recession, will resume at a moderate and stable annual rate. It is assumed that the rate of growth will resemble the immediate past rates of growth. (See Table 5)

Another assumption is that the City of Red Bluff will continue to exhibit a relatively constant proportion of the total urban area population. It is expected that its annexation policy will continue to be conservative and that most City population increases will occur within the present City corporate limits or its proposed Sphere-of-Influence.

A final assumption is that the rate of unincorporated area population growth will decline during the forecast period. This is justified due to the lack of available urban services, groundwater contamination problems and diminishing areas of small lot, prime development land with good highway access.

Table 5

Red Bluff Planning Area Projected Population

<u>Year</u>	<u>City</u>	<u>County</u>	<u>Total</u>
1995	13,478	4,988	18,466
2000	14,714	5,499	20,213

Note: Population forecasts were prepared utilizing a linear regression technique on each area.

B. Proposed Land Use

Allowable land use activities within the corporate limits of the City are presently given by the current land use designation diagram and by the underlying zoning districts shown on City zoning maps. Outside the City boundary, however, land use activities are presently managed by Tehama County. In the belt of land adjacent to the City limits lies the City Sphere-of-Influence. Within this zone, the area into which the City expects to grow, the community may specify land use activities which will be consistent with its present land use policy and with its goals for growth. The City may propose future land uses within the sphere-of-influence, designate them on the land use map and pre-zone their specific land use character.

The proposed City Sphere-of-Influence (SOI) is defined above and illustrated on the land use diagram. Proposed land use activities are as follows: (See also the Land Use Map)

1. North of the City Limit to Proposed (SOI) Boundary along the North 100 Year Floodplain of Blue Tent Creek.
(R-L) Residential-Low Density and (R-Lf) Residential-Low Density Floodplain

2. North of Walbridge Street, West of Highland Bluffs Development, East of the Baker Road (SOI) boundary and North to the North 100 Year Floodplain Boundary of Dibble Creek.
(R-L) Residential-Low Density
3. Internal Section of Block Split by Minch Road, Bounded on the East by Baker Road and on the South by Walnut Street.
(R-M) Residential-Medium Density
4. West Frontage of Baker Road South of Minch Road, North and South Frontage of Walnut Street (to a line 500 feet south of Walnut) West and southeast of the Baker Road Intersection.
(C) Commercial
5. North of Reed's Creek to City Limits and West and North to Proposed (SOI) Boundary and Southeast to City Limits at Luther Road.
(R-L) Residential-Low Density
6. South of Luther Road and West of Airport Boulevard Road Frontage.
(C) Commercial
7. South of Reed's Creek, West of Paskenta Road to (SOI) and South to North 100 Year Floodplain Boundary of Red Bank Creek.
(C) Commercial
8. South from Airport City Limit Boundary to South 100 Year Floodplain Boundary of Red Bank Creek.
(PS) Public Service and (PSf) Public Service Floodplain
9. Southeast of South Jackson Street Terminus, Inclusive of Red Bank Creek 100 Year Floodplain East to 400 ft Setback from South Main Street.
(R-Lf) Residential-Low Density Floodplain
10. East of Freeway, South of Grasshopper Creek Floodplain, South to Red Bank Creek Floodplain and East to 400 ft. Setback from South Main Street.
(R-L) Residential-Low Density
11. South of Grasshopper Creek Floodplain, West of South Main Street, a 400 ft. Zone South to the South 100 Year Flood Plain of Red Bank Creek.
(C) Commercial and (Cf) Commercial Floodplain
12. South and East of Southeast City Limit Boundary to Sacramento River Banks and South to Southerly 100 Year Floodplain Limit of Red Bank Creek.
(I) Industrial and (If) Industrial Floodplain
13. South and East of Messer Drive to Sacramento River Bank.
(PSf) Public Service Floodplain

14. Sale Lane to the North and East of City Limits, North to City Limit Line Along Antelope Boulevard and East to Philbrook Avenue.
(R-L) Residential-Low Density and (R-Lf) Residential-Low Density Floodplain
15. Unincorporated Frontage of Antelope Boulevard Lying above the 100 Year Floodplain East of Williams Avenue to Damon Avenue.
(C) Commercial
16. Belle Mill Road Frontage from City Limit and Proposed (C) in # 15 above to (SOI).
(R-Lf) Residential-Low Density Floodplain
17. North of the City Limits (along Antelope Blvd.) to the (SOI) Between Damon Avenue and Mulberry Avenue.
(R-L) Residential-Low Density
18. East of County Fairgrounds, North from a 400 ft. Northerly Setback from Antelope Blvd. to the Proposed (SOI) Boundary, East to a 400 ft. Westerly Setback from Highway 36.
(R-M) Residential-Medium Density
19. East from Trinity Avenue, Along and 400 ft. North and South of Antelope Blvd. to 200 ft. Beyond Highway 36 and North to Proposed (SOI) Boundary.
(C) Commercial and (Cf) Commercial Floodplain
20. East of the easternmost extension of Antelope Blvd. at Highway 36, to the Salt Creek Overflow (Proposed Easterly SOI Boundary).
(R-Lf) Residential-Low Density Floodplain
21. Northwest of City Limit Boundary at Sand Slough, East of I-5 Freeway and East to Proposed (SOI) Boundary.
(R-Lf) Residential-Low Density and (PS) Public Service

C. Proposed Residential Development Densities

1. Allowable Densities

Throughout the planning area residential densities are constrained by the upper level of permitted units per acre for each zoning district. These limits are presented in sections II A & B above and in the City Zoning Regulations.

Residential densities are further constrained by hazardous conditions in 100 year floodplains as designated by the U.S. Corps of Engineers. Those allowable densities will be provided in the City *Land Development Policies*.

Development densities for vacant residential designated land referenced above are as follows:

- a. Within existing and proposed Residential-Low Density districts the upper limit to allowable development densities is 1-5 units per acre for R-1 zoned land and 5.1-10 units per acre for R-2 zoned land.

- b. Within existing and proposed Residential-Medium density districts the upper limit to allowable development densities is 10.1-15 units per acre for R-3 zoned land and 15.1-20 units per acre for R-4 zoned land.

The standard for population density forecasting is 2.47 persons per household. This is the value calculated for Red Bluff by the U.S. Bureau of Census for the 1990 Census period. (See previous discussion of population characteristics in Red Bluff in Table 3.)

2. Expected Densities on Vacant City Residential Land (See Table 1-B, page 18)

Within the present corporate limits of Red Bluff there remain 975 acres of vacant low density residential land and 280 acres of vacant multi-family or medium density residential land. At median density values (6 units per acre at low density and 16 at medium density) the number of units and population (at present mean family size) that will occupy the present vacant land is as follows:

Density Class	Vacant Acreage	Potential Units	Potential Persons
Low Density Residential	975	5,850	14,450
Medium Density Residential	280	4,480	11,066
Totals	1,255	10,330	25,516

At median allowable densities, about 1,255 vacant residential acres within the present corporate limits of Red Bluff will accommodate approximately 25,516 persons, a number twice as large as the current 1991 City population.

3. Expected Densities on Vacant Proposed Residential Development Land Outside the Present City Corporate Limits (Excluding Floodplain Lands)

Within the area bounded by the proposed City sphere-of-influence and outside the present corporate limits there are approximately 1,838 acres of vacant developable land. (Land in the 100 year floodplain is excluded. Proposed floodplain densities are included in the City Land Development Policies) A breakdown of approximate area by region and expected densities by type of proposed residential development is as follows:

Proposed Residential Land Use

Area	Approximate Acreage	Density	Units	Persons	Area Key Above
West Brewery Creek	620	R-L	3,720	9,188	B2
Reeds Creek West Area	265	R-L	1,590	3,927	B5
Minch Road West Area	29	R-M	464	1,146	B3
Wilcox/Blue Tent Creek	47	R-L	282	697	B1
Grasshopper Cr./Freeway	66	R-L	396	978	B10
Antelope Blvd. North	37	R-M	592	1,462	B17
Antelope Blvd. South	35	R-L	210	519	B14
Sale Lane Area	15	R-L	90	222	B14
Adobe Road Area	12	R-L	72	178	
Miscellaneous	<u>107</u>	<u>R-L</u>	<u>642</u>	<u>1,586</u>	
Total Proposed Residential	1,233		8,058	19,903	

At median allowable densities, the approximately 1,230 vacant proposed residential acres within the proposed City sphere-of-influence will accommodate approximately 19,900 persons, or about 160% of the present City population.

D. Proposed Commercial and Industrial Development and Densities

Within the City limits there are an estimated 172 acres of vacant commercial land and 139 acres of vacant industrial land. (These estimates are being updated under an ongoing Chico State University study.)

Outside the present corporate limits and within the proposed City sphere-of-influence approximately 887 acres of vacant land is proposed for commercial and industrial development and for undetermined public services use.

Area	Approximate Acreage	Use
SP Railroad to Sac. River - South City	323	Industrial
Paskenta Rd. West Frontage	85	Commercial
S. Main St. West Frontage - South City	15	Commercial
West Walnut St.	65	Commercial
E. Antelope Blvd. N-S Frontage	59	Commercial
Airport Zone South to Red Bank Creek	175	Public Service
Wilcox Rd. to SP Railroad	<u>165</u>	Public Service
Total Other Proposed Use Acreage	887	

The allowable development densities for commercial and industrial land are provided by City Ordinance 828 of Chapter 25 of the City Codes (Zoning). Development densities within 100 year floodplain areas are provided for in the City Land Development Policies (III-A, page 59) and Chapter 26 of the City Code.

E. Implications of Growth for Urban Circulation

Vehicular circulation is addressed in depth in the Circulation element of the Red Bluff General Plan. The implications of expected growth during the 10 year planning period and for the ultimate buildout of the areas given above will complement that element and should be the bases for urban circulation policies.

Present levels of traffic generation and increases which will follow from residential development over the next 10 years will add a burden to the streets of the City. Increased congestion, noise generation, vehicular emissions and delays in travel time will result. The implications of increased population, business and industrial land use development will be loss of ease and comfort of movement on the streets of the City. Without alternative and improved methods for reducing traffic flows or facilitating them, a significant deterioration in traffic service levels will occur at the following locations. Policies addressing the impacts given below are provided in the Circulation element of the City General Plan.

1. Monroe Street

The development of residential properties off Monroe Avenue will cause significant increase in flows from the Walton Avenue intersection to the south. There are safety concerns for low density residential frontages and

for children walking to Sacred Heart School. The City has proposed local road improvements to Walton Avenue and signalization of the intersection.

2. **Walton Avenue**

Traffic volumes will increase on Walton Avenue through the Walton Ave. neighborhood as commuters divert to Main Street for more direct access to central Red Bluff. Noise and safety considerations will affect the neighborhood. The City recommends speed control to minimize effects.

3. **Main Street (North of Walnut)**

Traffic volumes will increase beyond design capacities as the Street serves as access to central retail and services for larger populations in northerly developing areas. Access to the freeway at Adobe Road may circumvent through-City traffic.

4. **Antelope Boulevard (Between Main Street and the Freeway)**

Traffic will increase along an already congested section of Antelope Blvd. Buildout of vacant commercial and residential land to the north and south of the freeway intersection, continued growth along the east Antelope Blvd. corridor and increasing use of the Antelope Blvd. freeway exit by residents from northerly and southerly locations will create excessive traffic backups and delays at all intersections from the freeway to Main Street. A new Adobe Road freeway access may abate some of this congestion. Diversion of traffic along parallel one-way streets east of Main Street may also relieve congestion and delays.

5. **South Main Street (Between Walnut Street and Luther Road)**

The development of the shopping plaza at South Main St. and Luther Road as a regional commercial center and destination has drawn larger traffic flow from outlying areas and much of it along South Main Street. As South Main Street remains the principal access for most of the population of Red Bluff, traffic volumes will increase. Congestion at signalized intersections will increase and heavy and slower traffic flow along the length of the street section will occur.

No other roadway is an appropriate alternative to South Main Street. The City should explore improving the attractiveness for shopping in the downtown. This will provide more balance in shopping destinations and less congestion on South Main Street.

6. **Main Street and Walnut Street Intersection**

Maximum levels of service have been exceeded at the intersection of Main Street and Walnut/Antelope Blvd. The peak hour flows and left turn cycles cause long delays and the implications of growth are that this condition will worsen. It is doubtful that engineering improvements at the intersection will have significant or long term beneficial effects. Some circulation mechanism should be adopted to divert traffic away from the intersection.

7. **Luther Road Airport Access**

With increased industrial development in the Airport industrial park most of the need for access has been shown to be for truck traffic. The principal connection from the freeway to the industrial park has been Luther Road and secondarily Kimball Road. Luther Road was designed

and accessed principally as a minor arterial street. Heavy truck traffic has degraded this function and increased safety concerns for pedestrians, schools, churches and low density residence along the Road. Noise, dust and vibration further degrade the neighborhood environment. New industrial development in the area and additional residential growth will exacerbate the problem.

The City will propose a new airport limited access arterial south of Luther Road.

IV. PUBLIC FACILITIES

A. Existing and Proposed Water and Sewer Facilities

In May 1991 the City completed its Master Plan for Infrastructure Capital Improvement Programs. The consultant report outlined the infrastructure system including water supply and distribution, wastewater collection, water recycling, traffic circulation, flood protection facilities and community services facilities and proposed a capital improvement program and fee structure for projects relating to those systems.

1. Water Supply and Distribution

The City of Red Bluff pumps groundwater from 12 deep wells and discharges it directly to its water distribution system. Well pumping capacity ranges from 500 to 2,644 gallons per minute. The water system mains consist of 52.65 miles of 4 to 24 inch diameter pipe (47% is 6" and 35% is 8") made of asbestos cement, cast iron, mortar lined steel, steel or polyvinyl chloride.

The groundwater supply is abundant and of high quality and will be adequate for the long term needs of the City. Well pumping capacity is also adequate to meet consumer demand.

Although the distribution system is of adequate coverage the preponderance of small diameter pipe, especially in areas of relatively higher City elevation or distance from the well pumping stations has caused a problem of low water pressure during periods of peak demand. Also, the system may not deliver adequate pressure for fire demand in remote locations.

Master Plan recommendations for the water distribution system are: 1) to construct new parallel mains (6.14 miles), 2) create a new pressure zone for elevations above 350 feet and, 3) increase reservoir storage capacity by modifying the well pump on/off control logic.

2. Sewer Collection and Treatment (Recycling)

The City maintains 36 miles of 6 to 30 inch sanitary sewer pipeline. The system includes collection pipe (excluding individual building laterals), 12 pumping stations and the wastewater treatment (recycling) facility.

Public and private users generate 1.1 million gallons of wastewater per day (an average of 88 gallons per capita) and summertime infiltration of groundwater into the system adds .15 million gallons per day (12%) to the wastewater flow. During wet weather infiltration rates are much greater and flows approach three times the summertime flow.

The Master Plan reports that "over 10,000 feet of trunk sewer mains are deficient under existing wet weather conditions and almost 40% (will) have inadequate capacity . . .at buildout". Capacity restrictions are expected approaching buildout of the planning period (to 2020). Capacity will be reached especially in areas where sections of pipe have reduced diameters or run along flat gradients. "Pumping stations also have a limited capacity for limited flows."

The water recycling facility processes 1.25 million gallons of effluent per day with a capacity of 2.0 mgd. The process includes primary, secondary and filtration and disinfection levels of treatment including anaerobic digesters for sludge. The quality of discharged effluent is lower in suspended solids than that of the Sacramento River into which they are released. The plant has adequate secondary treatment capacity until 2010. Repair, maintenance and improvements of other elements of the system should be undertaken during the next 10 years.

The Master Plan recommends construction of a Monroe Street/ Reed's Creek relief sewer, upgrading capacity of several pumping stations, sewer system repairs, and upgrading and improving equipment and processing systems at the recycling plant.

B. Existing and Proposed Solid and Hazardous Waste Disposal

Solid and hazardous waste disposal are of significant concern to Red Bluff. The City presently relies on the Tehama County sanitary landfill to dispose of most of its solid waste and must export hazardous waste out of the County to Sacramento, Kings and other counties. An analysis of solid waste management was included in the 1991 Tehama County study, Multi Jurisdictional Source Reduction and Recycling Element. Hazardous waste generation and disposal is reviewed in the 1989 Tehama County Hazardous Waste Management Plan.

1. Existing and Proposed Solid Waste Disposal

Estimates of total tonnage of solid waste disposed of from the City of Red Bluff for 1990 are given in Figure 1 in Multi Jurisdictional cited above. The annual solid waste disposal follows:

Type	Tons Per Year	Percent of Total
Paper	4,347	34.1
Organic Waste (food, wood, agricult. prod., etc.)	3,491	27.5
Yard Waste	1,555	12.2
Plastic	1,380	10.9
Glass	556	4.4
Metal	509	4.0
Special Waste (ash, sludge, tires, autos, etc.)	364	2.9
Other Waste (household hazardous, etc.)	532	4.1
Total	12,713	100.0

All the above waste was disposed of at the Tehama County landfill. The proportionate share by type of generator is commercial

(51.6%), residential (33.8%), or about 1.9 pounds per person per day, and industrial (14.6%). Red Bluff contributes 38.2% of the total 33,245 tons disposed in the County landfill in 1990. Forecasted levels of waste generation are that it will increase at the same rate as population growth. (Study estimates 2.7% per year) (Source: Multi Jurisdictional above)

The study proposes a ten step program of alternatives to landfill disposal. They include:

- a. Residential Curbside Recycling
- b. Multi-Family Recycling Receptacles
- c. Commercial-Industrial Recycling
- d. Drop-Off Recycling Centers
- e. Buy-Back Centers
- f. Institutional/Office Recycling
- g. Mobile Collection
- h. Manual Materials Recovery
- i. Mechanized Material Recovery
- j. Landfill Salvaging (removing bulky materials from the waste stream)
- k. Composting

2. Existing and Proposed Hazardous Waste Disposal

All hazardous waste generated by business, institutions, public agencies and households by law must be disposed of in State Department of Health Services hazardous waste facilities. These are located in Sacramento, Contra Costa, Kings and Santa Barbara Counties only. All businesses, institutions and public agencies are required to complete a manifest when hazardous waste leaves the site of generation.

The Tehama County Management Plan estimates that 96.3 tons of hazardous waste are generated annually in Tehama County and are shipped to off-site facilities. It further estimates that 124 tons of hazardous wastes are generated by households each year. (estimate 47 tons from the City of Red Bluff) There is no monitoring of this waste and virtually all of it is disposed of in garbage headed for the County landfill. The ignorance of households of the potential danger of local disposal creates a local environmental hazard which is not monitored by federal or State law. Examples of household hazardous wastes include pesticides and herbicides, household cleaners, automotive products, paint and coatings, polish, adhesives and sealants and batteries.

There are six identified hazardous waste contaminated sites in Tehama County and 16 sites associated with leaking underground tanks. Two contaminated sites affecting Red Bluff are the Louisiana Pacific Corporation south of the City and the land previously occupied by the PG&E Gas Plant at the northeast corner of Oak and Rio Streets. The Louisiana Pacific site was found to have discharged contaminated wastewater and to have failed to register underground tanks or remove contaminated soils. Remedial action has been taken by the company. Contaminants at the PG&E site in Red Bluff have not yet been identified.

The management plan recommends treatment, storage and disposal (TSD) of hazardous wastes in the County. The plan recommends alternative practices including: Source Reduction, Recycling, Treatment, Incineration, Stabilization, Repositories and Land Disposal. No specific sites were recommended for recycling, treatment or disposal. (See also

C. Existing and Proposed Recreation Facilities and Activities

The City of Red Bluff has 81 acres of recreation land not including public school property, undeveloped future recreation sites and various athletic courts. The City of Red Bluff Department of Parks and Recreation makes active use of most of these spaces and facilities in the Summer season and Fall-Winter-Spring season programs. An inventory of recreation facilities and programs is given below.

1. Recreation Facility Inventory

- a. Airport/John Trainor Park
Frey and Tosh Lighted Softball Fields, Children's Playground
- b. Campfire Recreation Area and Building
Playground Equipment
- c. Carl Coleman Tennis Courts
Four Lighted Tennis Courts
- d. Diamond Park
Ball Field, Playground, Basketball Court
- e. Forward Park
Ball Diamond, Basketball Court, Playground, Picnicking
- f. Jackson Heights Park
Lighted Ball Diamond
- g. Lincoln Street Tennis Courts
Three Lighted Courts
- h. Luning Street/Lots for Tots Playground
Playground Equipment
- i. River Park and Marina
McGlynn Swimming Pool, Band Stand, Boat Ramp, Volleyball and Basketball Courts, Playground Equipment, Picnicking
- j. Samuel Ayre Park and Dog Island
Picnicking, Fishing, Nature Trails, Bike Trail

In addition to the above City maintained facilities there are other public facilities in the City which are used, when available, for City sponsored recreation activities. They include the swimming pool at the Red Bluff High School; volleyball and basketball at the High School and Vista School; softball, baseball and badminton at the High School and soccer at Vista School.

2. Recreation Activities

The City of Red Bluff Parks and Recreation Department offers a year-round program of activities. Its Summer Program and Swim To Live Programs offer a variety of community activities at facilities listed above. Activities begin in mid-June and continue through mid August. They include the following:

Summer Program

Band Concerts
Baseball
Basketball
Lob Ball
Softball
Beginning Tennis
Intermediate Tennis
Water Exercise
Swim Team
Early Risers Swim
Public Swim
Playground Activities
Senior Citizen Activities

Swim To Live Classes For:

Tiny Tots
Beginners
Advanced Beginners
Intermediate
Swimmers
Basic Water Safety
Emergency Water Safety
Adult Beginners
Lifeguard Training

The City Recreation program for Fall-Winter-Spring begins in mid-September and runs through May. The programs focus on indoor activities including the following:

Fall-Winter-Spring Program

Badminton	Soccer League
Baseball	Softball
Basketball	Beginning Tennis
Cake Decorating	Tiny Tot Time
Gym Drop-In	Volley Ball
Senior Citizens Activities	

3. Other Recreational Opportunities

The City of Red Bluff is fortunate to be located in a region of abundant recreational opportunities. In the immediate locale the Sacramento River offers opportunities for boating, fishing and viewing boat races. The United States Department of Agriculture is proposing the development of Lake Red Bluff. The recreation area will offer swimming, camping, trails, a nature pond and environmental study area, interpretive facilities, day use and picnic areas, boating and fishing.

The City has designated an urban bikeway. It affords an excellent opportunity for area family cycling. The bikeway is designated along only a portion of its entire length, however.

The larger region offers many opportunities for hiking, camping, hunting, skiing and other activities at Lassen Volcanic National Park.

4. Expansion of Recreational Opportunities

A number of sites are proposed for expansion of the City recreation land inventory. New City owned sites which may be improved include the following:

a. Spaulding Acres

The old City dump on Baker Road is the largest vacant City owned tract considered for recreational use. The site may contain dangerous materials, however, and before any use is considered a full soils and groundwater analysis should be completed. Planning for the site should be coordinated with the City Parks and Recreation Department.

b. Forward Park Expansion

A large acreage of floodplain and wooded land lies to the east of Forward Park (not unlike Chico's Bidwell Park in character). This land is ideal for recreational and day use and is presently used and somewhat abused, informally. Improving trails, providing family picnic sites and limiting off-road vehicle access while improving auto access and managing activities would provide Red Bluff a very significant addition to its park inventory.

c. Jackson Heights School Property

A substantial amount of the Jackson Heights School grounds are ideal for recreational purposes. Agreements with the school district for its use will allow expansion of recreational opportunities in a very central location.

d. Kraft Playground

The improvement and maintenance of Kraft playground, off Rio Street, is a worthwhile project for the City. The quiet location and river view opportunities make it ideal for day and short term use for children and downtown workers.

V. EDUCATIONAL FACILITIES AND PROJECTED DEMANDS

A. Existing Educational Facilities

There are a range of public and private educational programs in the Red Bluff urban area. They include public supported education at the following: Red Bluff Union Elementary District including Bidwell, Jackson Heights, Matteer and Vista Schools and the campus of Red Bluff Union High School.

Private education is available at Mercy High and Sacred Heart Elementary Schools (Catholic), Community Christian Schools (Baptist), and 7th Day Adventist School.

B. Enrollments and Projections

1. Red Bluff Union School District (K-8)

From the 1987/1988 school year to the close of the 1990/1991 year the district has shown annual growth of 169, 69 and 77 students. Most of this has occurred in the kindergarten and 1st grade levels with lesser average increases in

the 6th and 8th grades. Enrollment figures for the 1991-1992 academic year show a decrease of 73 students to a total of 2282 students. There is no apparent grade level pattern in the decrease. No particular reason for the decrease is clear to the district administration.

A fair presumption is that local economic conditions have caused the outmigration of families with younger children. Assuming that those conditions have stabilized in the short term then enrollments should also stabilize. Projections for elementary public school enrollments are that they will slightly decline and level in the next two years.

Currently, phase II construction at Matteer School is underway and existing classroom space needs should be met. The District is responding to a northerly shift in student distribution. As the City grows to the north a school site will be required on the north end of Red Bluff. The District is attempting to acquire 8 acres near Monroe Avenue.

2. Red Bluff High School District (9-12 and Continuation School)

The High School district has shown annual increases in enrollment of from 60 to 65 students per year. In 1990-1991 enrollments increased by 83 students to 1790 and in 1991-1992 they increased by 134 to a total of 1924 students. Increases were noted from feeder schools but the pattern or causes were unclear. It must be assumed that most of the increase was due to movement of a larger group into the high school from the 8th grade (44 more than the previous year from Red Bluff Elementary schools alone).

Assuming the downturn in local economic conditions may have affected enrollments overall in Red Bluff it is not apparent in the High School statistics. It is assumed that older children are from families with more job seniority or with more transferable skills than younger families and have been less displaced by the recession. Assuming that economic conditions stabilize, enrollments for the High School District should also stabilize. Numbers of students moving up from elementary schools will decline somewhat. The High School District projects an additional 60 students for the 1992-1993 year.

The High School District is undertaking a project to construct 1 or 2 portable classrooms on-site for the 1992-1993 academic year. These should accommodate additional space requirements. In the long term, the District will continue to meet its needs for space on the present site or through improvements on a 20 acre site it owns in the Antelope area off Trinity Street.

3. Private Schools

a. Mercy High School (9-12)

In recent academic years Mercy High School has enrolled between 100-110 students. In the 1991-1992 academic year its enrollment climbed to 143. The cause for the increase is not well known to the administration. Further increases are not anticipated and additional educational space will not be required. Its present capacity for high school level education is for approximately 200 students.

b. Sacred Heart Elementary School (K-8 plus Pre-school)

Enrollments at Sacred Heart Elementary School have increased from 125 students in 1986-1987 by an annual average of

5-8 students. The 1991-1992 enrollment is 150. No significant increase was noted during the present academic year nor is it anticipated in the next. The K-8 capacity is 225 children and no new facilities are anticipated.

Sacred Heart's preschool increased its enrollment from 43 in the last academic year to 63 in the present one. Continued large increases are not expected and adequate space is available for growth.

c. Community Christian School (Pre-school, Day School, Kindergarten Campus) (1-8 Campus)

Both campuses of the Community Christian School are increasing enrollments. Present enrollment in the Cedar at Jackson Pre-School/Kindergarten campus is 40 and is projected to 50-60 over the next 2-3 years. Enrollment in the grade 1-8 church facility near Roundup and Chestnut Streets (near Antelope Blvd.) is presently 80 students. It is projected to grow to 120 students over the next 2-3 years.

Growth of the student population at present rates will require acquisition of a 10 acre site for construction of a facility to house both present campus programs. A site at Willow and Chestnut Streets is under consideration. The school anticipates action on expansion during the next 3-5 years and is also considering broadening its educational program to include a secondary school.

d. 7th Day Adventist School

The 7th Day Adventist school on South Jackson has a 1991-1992 enrollment of 14 students in a grade 1-8 program. Enrollments have been stable over the last three years and are expected to remain at present levels. The church has adequate space for growth in its present facility.

Total 1991-1992 Academic Year Enrollments Summary

<u>Primary School</u>	<u>Enrollment</u>	<u>Trend</u>
Red Bluff Union	2282	Decreasing
Sacred Heart	150	Increasing
Community Christian	120	Increasing
7th Day Adventist	<u>14</u>	Stable
Total	2566	
<u>Secondary School</u>	<u>Enrollment</u>	<u>Trend</u>
Red Bluff High	1923	Increasing
Mercy High	<u>143</u>	Increasing
Total	2066	

VI. ENVIRONMENTAL IMPLICATIONS FOR GROWTH : A MITIGATED NEGATIVE DECLARATION

The State of California expects that as a part of the planning process local governments can develop and maintain a high quality environment. The adoption, update, or ammendment of a general plan or element constitutes a project under the California Environmental Quality Act (CEQA) and the CEQA Guidelines. If any policy(ies) of the adopted plan or element, individually or cumulatively, may have a significant effect on the environment then the government must adopt an environmental impact report.

Since the general plan elements and the EIR overlap in their purpose and content the local government may combine them into a single document (CEQA Guilelines, Section 15166). If they are ... "combined, the general plan must address all the points required in an EIR under Article 9 of the CEQA Guidelines and it must contain a special section or cover sheet identifying where the general plan document addresses each of the points required in the EIR". (California General Plan Guidelines, p. 157)

The land use element constitutes only one of 7 required elements of the general plan. However, much of the forecasted change in the City due to anticipated growth may be found in the element. Without proposing specific programs or actions which will encourage population or economic growth, the element, nevertheless, may anticipate it and some assessment of the effects on the environment should be made. Other significant plan elements which have implications for growth effects include the Circulation and Housing elements. The environmental impacts for the Circulation and Housing elements will not be reviewed here except by reference to insure internal plan consistency.

The environmental effects of adopting and implementing the land use element of the City of Red Bluff General Plan are reviewed below. They are presented directly or by reference to the element section in which the information appears. (The Environmental Checklist is Included in the Appendix)

A. Description of the Project

1. Planning Area

The City of Red Bluff planning area and sphere of influence are described on pages 4 and 5 of the element and on the land use diagram. The planning area extends well into unincorporated land around the City but describes that area which logically may be considered to be related to the economy, social area and zone within which land use activities will affect the City. The sphere of influence is the area into which the City logically expects to expand within the planning period of ten years and for which the City would seek some coordination with the County of Tehama for growth management.

2. Growth Goals, Objectives and Policies

Goals, objectives, policies and implementation measures are central to the project description. They are included within section (Roman) I,D - **Introduction** of the element beginning on page 7 and within section VIII - **Appendicies A, 1,2 & 3**. Goals which have potential environmental impacts are those including **Goal III. Community Growth and Annexation**, **Goal IV. Industrial Development** and **Goal V. Central Business Development**. Possible environmental impacts may result from implementation of various objectives of those goals. The objectives are presented below:

Community Growth and Annexation (See page 8)

- Objective A. Provide and maintain rural and urban services and facilities of high quality for adequate health, safety and comfort, and educational, cultural and recreational facilities for public benefit and enjoyment.
- Objective B. Expand the Sphere of Influence where appropriate to reflect realistic growth frontiers.
- Objective D. Promote infill development through incentives to manage community land use balance and increase efficiency of service delivery.
- Objective H. Direct residential development, under careful site and project design, to areas south of Kimball Road, to the west outside creek floodways and riparian habitat, and to the north, west of the freeway.

Industrial Development (See page 8)

- Objective A. Phase appropriate future industrial development to the area south of the municipal airport.
- Objective B. Direct heavy truck and rail oriented industrial development to the freeway/S. Main St. interchange and Montgomery Road area.

Central Business Development (See page 9)

- Objective A. Promote lot assembly and marketing. (in the Central Business District)
- Objective C. Undertake "Main Street" development programs. (in the Central Business District)

The Land Use Element also anticipates that environmental impacts will occur due to the location and intensity of residential growth. This growth will be based on population forecasts in Table 5, page 27, and according to locations and intensities outlined in sections III B, **Proposed Land Use** (See also Land Use Diagram); III C **Proposed Residential Densities**; III D, **Proposed Commercial and Industrial Densities** and III E, **Implications of Growth for Urban Circulation**.

B. Environmental Setting

The environmental setting for the Land Use Element is summarized under Section II of the element, **Land Use Classification and Existing Land Use Distribution**. Specifically the appropriate environmental issues regarding vegetation, minerals, agricultural resources, aesthetics and recreation are presented in the following sub-sections: II F, **Natural Resource Areas, Floodplains and other Resource Areas**; IV C, **Existing and Proposed Recreational Facilities and Activities**.

Existing systems of local infrastructure are detailed in several sources and sections of the Land Use Element. The best source of infrastructure information is presented in Master Plan for Infrastructure prepared in 1991 by Bryan Murphy. Relevant sections are presented in the Land Use element in Section IV A, **Existing and Proposed Water and Sewer Facilities**.

Transportation facilities, modes and movements are presented in the Circulation element of the City General Plan. They are reviewed and assessed summarily in Section II D, Effects of Regional Transportation Access on Local Land Use and III E, Implications of Growth for Urban Circulation.

C. Possible Effects of the Project on the Environment and Proposed Mitigations

One of the purposes of the environmental analysis is to evaluate the degree to which element objectives, policies or proposals involve commitment of land or lead to alterations in the physical environment which result in significant effects. Unquestionably, the expected growth of City population (from 12,434 in 1990 to 14,714 in 2000 and the urban area from 16,719 in 1990 to 20,213 in 2000) with simultaneous development of the economic base and infrastructure for both will have significant effects on the physical environment. (See Figure 4, page 26) Individual projects will require specific assessment of those effects. A summary of the expected overall effects is listed below:

1. **Disruption of the Landscape**

Environmental Effects

New land development will inevitably require alteration of the surface soils or geology. The significance will depend on the scale of grading, filling and disruption of the surface. Any significant increase in erosion, siltation, soil compaction, surface instability or loss of prime agricultural soils should be mitigated.

Mitigations

- a. Implement Community Environment Objective I A to protect prime agricultural land. (See page 7)
- b. Implement Community Environment Objective I C to incorporate natural site landscape features into project design.
- c. Implement Section IV - **Grading Policies** of the adopted Grading, Drainage and Ground Cover Policies of the Land Use element (See page 63).
- d. Implement Appendix Chapter 70 (Grading) of the Uniform Building Code.
- e. Implement appropriate surface development standards provided by Objective I C and the policy adopted as **Land Development Policies** in Appendix A-1 (See page 55) and **Grading, Drainage and Groundcover Policies**, in Appendix A-2. See especially subsections IV (See page 63) and VI (See Page 65).

2. **Impacts on Air Quality**

Environmental Effects

The air quality effects of increasing the City economic base and population by over 18 percent in the next ten years will be significant. Air quality will be degraded along principal traffic corridors, in the downtown and in the industrial zone along south Main Street. Levels of nitrogen oxides, particulates,

carbon monoxide, ozone and hydrocarbons will be elevated but probably remain below harmful concentrations. Individual development proposals should provide models of projected emissions and compare them with applicable air quality standards.

Mitigations

Implement mitigations numbered 10 a, b, f, g, & h recommended below under **Effects on Urban Circulation**. (See page 47)

3. Impacts on Water

Environmental Effects

The growth and development of Red Bluff during the next ten years is likely to have substantial effects on surface and groundwater in the area. Effects will include the following:

- a. Change in the rate of surface absorption on areas covered by impermeable cover, i.e., roads, driveways, buildings, etc.
- b. Earth fill of floodplains will alter the course and flow of floodwaters and induce flood potential.
- c. Cover native and induced wetland areas.
- d. Change the quantity and quality of ground waters through reduced infiltration of storm water and increased infiltration of surface contaminants resulting from residential, commercial and industrial uses.
- e. Increase in surface runoff due to increased area runoff coefficients with greater surface impermeability.
- f. Increased runoff turbidity and siltation discharged into local water systems due to increased surface erosion. Water systems affected will include Red Bank Creek, Reed's Creek, Dibble Creek and Lake Red Bluff (recreational Sacramento River).

Mitigations

- a. Implement Objective I A (see page 7) to discourage development within riparian and wetland areas.
- b. Implement Objective III H to discourage development within creek floodways and riparian areas.
- c. Implement **Land Development Policies** Sections II B, (see page 56) III C and IV in Appendix A-1, regarding floodways, watercourses, erosion control and storm runoff.
- d. Implement **Grading, Drainage and Ground Cover Policies** Sections IV B (see page 63) and VIII B regarding runoff and erosion control.

4. Impacts on Plant Life and Wildlife Habitat

Environmental Effects

The effect of land use development during the planning period is that substantial amounts of surface vegetative cover will be removed including native grasses, shrubs and trees. The most notable effect will be the potential loss of native oak woodland in the rolling hills on the northern portion of the City. The potential loss of riparian communities must be considered especially along Reeds, Red Bank, Brickyard, Grasshopper, Brewery, Dibble and Blue Tent Creeks. Though the potential loss of local native plant and animal communities may occur no rare or endangered species in the area should be affected. Loss of agricultural land will occur at Adobe Road and the freeway.

Mitigations

- a. Implement Objective I A (page 7) to discourage development in riparian, wet and agricultural areas.
- b. Implement Objective I B to preserve and replace native trees.
- c. Implement **Grading, Drainage and Ground Cover Policies** Section IV A in Appendix A-2 (page 63) to minimize disturbance of riparian and other existing vegetation and Section V regarding vegetation preservation, replacement and new species introduction.
- d. Implement **Land Development Policies** in Appendix A-1, Sections II B 3,5 regarding tree cover and endangered species, III B regarding natural tree cover, and III C regarding development within greenways and floodplains.

5. Noise Impacts

Environmental Effects

The expected growth and development in Red Bluff will increase noise levels along principal arterials and collector roadways and will expose people to elevated noise levels along those and the railroad corridors through the community.

Mitigations

- a. Implement Objective III I (page 8) to discourage residential development adjacent to principal roadways, the railroad and the airport.
- b. Implement Objective IV C (page 8) to limit the effects of rail traffic and IV D to discourage noise sensitive development on land adjacent to noise sources.
- c. Adopt and implement section III D (page 59) of the **Land Development Policies** to set noise buffering standards within adopted noise corridors.

6. Land Use Impacts

Environmental Effects

Implementation of the Goals, Objectives and Policies including the proposed land use distribution will be strictly in accordance with the planned land use for the City. There will be no conflicts with uses proposed by the County of Tehama or with other land uses in the vicinity. With the exception of the small acreage at Adobe Road and the freeway there will be no conflict with agricultural uses of the land. (The policy of the City is not to seek urban expansion onto prime agricultural lands east of the Sacramento River.)

Mitigations

None are required.

7. Natural Resources/Aesthetics Impacts

Environmental Effects

The proposed land use element has the potential to degrade scenic resources in the north Red Bluff area.

Mitigations

Implement mitigations listed above under **Impacts on Plant Life and Wildlife Habitat**. (See No. 4 above)

8. Population Impacts

Environmental Effects

The land use element proposes the allocation of anticipated population growth in the City. The spatial effects of population growth will be found within each of the sections of the land use element. The distributional effects are that growth will take place to the south, west and north of the City. Effects include demand for adequate public utilities and services in those areas.

Mitigations

The goals, objectives and policies of the Land Use element presented in the **Introduction** of the element, Implementation Measures found in Section VIII (Policies Appendix, page 55-68) of the element and other measures contained in the City Zoning Code, Master Plan for Infrastructure and other plans are adequate mitigations for population growth effects.

9. Housing Impacts

Housing Effects

The effects of population growth on housing demand are presented in Sections III B & C of the Land Use element. The discussions of **Proposed Land Use** and **Proposed Residential Development Densities** outline expected population and unit densities within all proposed development areas of the City

sphere-of-influence. The particular effects on demographic sectors of the community and on government agencies are presented in the **Housing Element** of the General Plan.

Mitigations

Mitigations for the environmental impacts of housing growth are presented in all other sections of this Negative Declaration.

10. Effects on Urban Circulation

Circulation Effects

The environmental impacts of growth on circulation in Red Bluff are addressed in section **III E, Implications of Growth for Urban Circulation**. Nine areas in the community are highlighted for the effects of increased traffic volumes. The principal effects are where road design capacities will be exceeded, congestion and delays will occur, pedestrian safety becomes jeopardized, increased noise, vibration and general hazard result. The particular effects are indicated for each area where circulation deterioration is expected. (See the Circulation element for related effects.)

Mitigations

- a. Reduce vehicular use of urban arterial and collector streets by increasing density of population in central urban locations. Increase allowable densities in those locations and promote infill development. (See Objective **III D**)
- b. Centralize heavy truck oriented industry to freeway sites. Restrict crosstown industrial vehicle access to the airport industrial park to lightweight vehicles with infrequent service. To facilitate this, encourage siting of only light industry in the airport industrial park. Implement Industrial Development Objectives **IV A & B**.
- c. Work with the California Department of Transportation to provide a freeway access point at Adobe Road. Improve collector access to Adobe Road from Monroe Avenue without degrading the Walton Avenue area neighborhood.
- d. Improve signalization and traffic signing along the Antelope Boulevard approach to Main Street, at the intersection of Antelope and Main Streets, at Walton and Monroe Avenues and along Luther and Kimball Roads.
- e. Reduce the nuisance effects of increased circulation through adoption of a noise corridor overly to the land use diagram setting noise buffering standards along appropriate freeway, highway, arterial and collector roadways, along the SP railroad right-of-way, near heavy industrial sites and in the airport overflight zone. Implement Industrial Development Objectives **IV C & D**.
- f. Complete and encourage use of the City bikeway.

- g. Promote use of public transit within the City.
- h. Support a program to stagger work schedules for business, industry and government.

11. Public Services Impacts

Public Service Effects

The effects of growth, managed by policies in the land use element, will include diminished capacities in public utilities and increased demands on services now provided by the City. The effects on public utilities are outlined in Section IVA, **Existing and Proposed Water and Sewer Facilities** in the Land Use Element. It is noted that present capacities are adequate for the planning period but that improvements should be implemented.

The effects of growth on the public education system are reviewed in Section V **Education Facilities and Projected Demands**. Similarly, adequate capacity exists for projected facility demand.

The effects of growth on recreation in Red Bluff are minimal. Section IV C **Existing and Proposed Recreation Facilities and Activities** in the land use element addresses the issue. Adequate space and scope of activities will meet growth in demand with exception of expanding neighborhood on-site needs.

The effects of population and economic growth on police and fire services will be significant. The ratio of police officers and fire officials will decrease with an increase in population. With an increase of about 2,300 persons over ten years an additional 3 police and 3 fire personnel will be required. (1.5 emergency service personnel per 1000 population) An increase in 1-2 administrative staff will also be required. Expansion of facilities will be necessary to accomodate this expansion of personnel, equipment and office requirements.

The requirements for City administration services will increase with population growth. Overall staff requirements in Public Works, Community Development, Recreation and other services will increase at approximately 3 persons per 1000 increase in population. An increase in staff by about 7 persons will be required by 2000. A new City Council Chamber and public meeting hall has been proposed by the City to permit expansion for necessary new staff and work space requirements.

The County library system serving the City of Red Bluff will have to be expanded to meet the needs of a growing population. The Tehama County General Plan outlines requirements for these facilities.

Mitigations

- a. Implement the schedule of development fees and user charges proposed in the 1991 Master Plans for Infrastructure, Capital Improvement Programs and User Charges and Development Fees. The revenues generated by expanded growth will be directly related to necessary improvements. User charges will compensate for costs in the existing system public services systems. Also see Section VI in Appendix A-1 (page 61).
- b. New developments should provide for on-site recreation opportunities. Children's play areas and leisure space should be a necessary component of subdivision design. See also Section V **Lot or Site Improvements** in the Land Use element **Land Development Policies** (page 60).

- c. Use developer fees to provide for increased public service costs outlined above.

12. Energy Impacts

Environmental Impacts

The growth of population in the City of Red Bluff during the next ten years will have energy impacts for housing, business, industry and for energy consumption by additional vehicle commuting, over longer distances and in longer traffic delays. Increases in energy consumption may be unavoidable but might be minimized with appropriate mitigations.

Mitigations

- a. Increases in energy consumption may be mitigated through adoption of the recommended mitigations outlined above in Negative Declaration Section **10, Effects on Urban Circulation**.
- b. Promote energy conservation through, City, public school and energy utility company programs and advisories.

13. Impacts on Solid Waste Disposal

Environmental Impacts

The effect of population and economic growth will be to increase solid waste generation and reduce capacity of County landfill facilities. A discussion of the municipal solid waste stream is provided in Land Use element Section **IV B 1 Existing and Proposed Solid Waste Disposal**.

Mitigations

Solid waste mitigations are presented in the Land Use element Section **IV B 1 Existing and Proposed Solid Waste Disposal**. The City is encouraged to continue its Solid Waste Reduction and Recycling Program.

14. Cultural Resources Impacts

Environmental Impacts

Historic riverbanks and bluffs in the Red Bluff area are archeologically sensitive. Development in these areas may result in the loss of historical resources and site evaluations should preclude approval of any subdivision map.

Mitigations

Adverse impacts on cultural resources may be mitigated by requiring site review by qualified professionals prior to development approval.

D. Cumulative and Unavoidable Effects

Cumulative and unavoidable effects of implementation of the Land Use Element of the Red Bluff General Plan include those which are a simple function of increases in population and business development. Cumulative effects are those which may be limited for any particular development but cumulatively, for all proposed developments may be significant. All the environmental impacts of effects given above are cumulatively significant. Mitigation measures are presented to minimize those cumulative effects.

Unavoidable effects of the implementation of the Land Use element are those which may be mitigated but not unavaoided. Certain effects are unavoidable and significant. These include the following:

- a. Increased consumption of open space lands around Red Bluff.
- b. Increased traffic flow on principal collector streets, arterials and highways. Increased congestion at principal intersections.
- c. Decreased competitiveness of traditional downtown business and proliferation of roadway and satellite business development.
- d. Erosion of rural community character.
- e. Increased cost of government services and facilities.

E. Alternatives to the Proposed Land Use Element

During preparation of the Land Use element several alternatives for the allocation of population and for growth management were considered.

One growth alternative was to consider extension of the sphere of influence and annexation to the east of Red Bluff along the Antelope Boulevard corridor. The cost of services and fiscal returns to the City would cause a net decrease in the ability to support that development and ensure the health and safety of residents.

A second growth alternative was to increase density of development on presently well served, incorporated land to the south of the City. That alternative was not desirable due to the lack of demand of higher proportions of apartment style housing at that distance from the downtown and without adequate public transit.

A third growth alternative was to permit conventional development in accordance with existing zoning in proposed and expected housing developments on the north side of the City. The third alternative would have cost the removal of large acreages of native oaks, filling of intermittant drainage channnels and the loss of significant habitat.

The fourth alternative is the proposed land use and growth management alternative in the Land Use Element, outlined in Sections III B, C and D above.

The "no project" alternative was not considered since California Government requires the periodic updating the City general plans.

F. Growth Inducing Impacts

Population and economic growth in the Red Bluff area are inevitable. The purpose of the Land Use element of the general plan is to forecast the magnitude and direction that growth will take. There is little in the Land Use element that may constitute an inducement of growth either in magnitude or location.

The population forecast is a conservative one. Unexpected growth will not occur as an outcome of growth projections.

The distribution of growth proposed in the element will not induce growth. The areas of expected growth are those logically expected based on past patterns. None of the expected growth will be approved until community utilities and services are in place to support them. Existing roadway infrastructure will support that growth. No new access roadways are proposed in the element.

VII. IMPLEMENTATION MEASURES

A. Adopt and Periodically Update Planning Goals, Objectives and Policies

Section 65100 of the California Government Code requires that planning agencies prepare, periodically review and revise as necessary the general plan. There is no mandatory schedule for update of the land use element, although the element should be revised and updated regularly. State law provides that the element may not be amended more than four times per year, however.

Traditional procedure is that policies, the information base and the entire content of the element be reviewed for update at least each ten years. If a constant updating process keeps the plan and elements current, that wholesale update will require little effort and expense. Should the plan or elements become out of date and bear little relationship to City land development and planning activity, the City will have little basis with which to back up its decisions as rational ones based in the security of legal consistency.

B. Implement Policies and Standards for Land Development; Grading, Drainage and Ground Cover; and Annexation (See Policies Appendix)

The goals, objectives and policies and substantive direction given by the internal recommendations of the text of the land use element and Land Use Map must be implemented by action of the planning commission and City council. Implementation is accomplished through the wise use of the City zoning ordinance, subdivision regulations, policies (provided in the appendix and other City ordinances and standards. (See Section D beginning on page 79 below)

Plan implementation means simply that these guidelines and standards be used to influence or direct consistent, sound decisions regarding land development or public improvements.

C. Insure Consistency in Planning, Zoning and Within Plan Elements

Section 65300.5 of the California Government Code requires that the general plan and its elements comprise an integrated and internally consistent and compatible statement of policies. The State Code requires that actions to adopt, modify or implement any policy, provision or measure in any element of the general plan must be consistent with the policies or provisions contained in other elements of the plan. Consistency more narrowly defined requires (1) equal status among elements, (2) consistency between elements, (3) consistency within any element, (4) consistency between special area plans and the general plan and (5) consistency between the text of the general plan and the land use diagram (map).

For general law cities like Red Bluff the Government code further requires consistency between zoning and subdivision provisions and those of the general plan, especially the land use element. (See Government Code Sections 65860 and 66473.5) Lastly, capital facilities decisions must be consistent with the general plan. Government Code section 53090 requires most public works projects undertaken by special districts, including school districts, be consistent with zoning and the general plan.

**D. Adopt and Implement Special Land Development Ordinances
(Additional to Section B Above)**

The City of Red Bluff should adopt additional regulations and standards to implement the goals, objectives and policies addressed in section **I D** of the Land Use element. Suggested ordinances and standards are given below:

1. Landscape Easments and Standards
2. Noise Ordinance and Sound Attenuation Standards
3. Tree Ordinance
4. Architectural and Sign Review Ordinance
5. Grading Ordinance
6. Hillside Development Standards
7. Non-Residential Floor Area Standards
8. Parking Lot Landscaping Standards

VIII. APPENDICIES

- A. Policies Appendix**
- B. Glossary of Terms**
- C. Environmental Checklist**
- D. Relevant Data**
- E. Index**

POLICIES APPENDIX

1. LAND DEVELOPMENT POLICIES

I. Overall Housing Densities

For urban and suburban land use classifications including "R-L", Residential-Low Density; and "R-M", Residential-Medium Density, the proposed residential densities per gross acre of the development site are as follows: (See map, page 6, and proposed densities on pages 29-30.)

A. "R-L", Residential-Low Density

For urban areas served by City water and sewer systems and for which other urban services are or may be available. The appropriate zoning is R-1, or R-2:

Up to 10 Dwelling Units Per Acre

B. "R-M", Residential-Medium Density

For urban areas intended for multi-family and apartment dwellings where all urban services and site improvements are available. These areas have been zoned R-3 or R-4.

Ten point one (10.1) to 20 Dwelling Units Per Acre

II. Development Pattern

A layout plan of a proposed development shall be submitted indicating the pattern or design of streets, dedications and other improvements in relation to the landscape conditions of the project site. The site topography, drainage pattern, geology, soil characteristics, vegetative cover and hydrology will determine the resultant pattern of surface grading, improvements and lot layout.

Two development pattern options are acceptable. One pattern is the traditional, uniform development design pattern. The second pattern is a planned development pattern which is designed to conform to physical constraints and opportunities afforded by the site.

A. Uniform Development Pattern

1. The City will permit traditional, uniform development if all of the following site conditions exist:
 - a. No natural area in the development exceeding a 10% slope
 - b. absence of 100 year floodplain, natural spring, seasonal stream course or wetland as defined by U.S. Corps of Engineers

- c. absence of established natural tree cover or groves of trees the mature individuals of which have trunk diameters exceeding 6 inches at 3 feet above ground level
- d. no evidence of unstable surface or subsurface geology that cannot be stabilized through methods recommended by a qualified professional.
- e. no evidence of rare or endangered plant or animal species.
- f. no riparian habitat as delineated on maps or as defined in text adopted by the City.

2. Permitted Densities and Design

Where a uniform development pattern is approved by the City the maximum densities will be allowed, as specified by the appropriate zoning district classification.

3. Density Bonuses (Affordable Housing)

In order to achieve the goals and objectives of the environmental conservation policies of the land use element and the affordable housing requirements of the housing element density bonuses may be allowed. The City may allocate these bonuses as specified by Chapter 4.3 of the State Planning, Zoning and Development Law.

To qualify for affordable housing density bonuses the development proponent must agree to provide all additional bonus units in the form of units determined to be needed by the housing element of the general plan.

B. Planned Development Pattern

A planned development pattern will be required by the City whenever local site conditions indicate a need for environmental conservation due to an unstable, hazardous or ecologically sensitive landscape. Design review by the City will be required and will be consistent with all policies and standards of the PD use permit provisions of Chapter 25 of the City regulations.

1. Conditions Requiring A Planned Development Pattern

Where the conditions listed below are found on a project site development shall conform to a plan submitted to the Planning Commission. This plan shall conform to the City's Design Review Guidelines and Planned Development Use Permit Zoning Regulations. The plan shall also include conditions applied to development relating to density, grading, land cover, landscaping, improvements, erosion control and/or surface restoration.

- a. Natural area within the project site exceeding 10% slope
- b. 100 year floodplain, natural spring, seasonal stream course or wetland as defined by the U.S. Corps of Engineers
- c. natural tree cover or stands of trees the mature individuals of which have trunk diameters exceeding 6 inches at 3 feet above ground level
- d. evidence of highly erodible soils or unstable surface or subsurface geology
- e. evidence of rare or endangered plant or animal species

- f. presence on site of a Greenway overlay designated in General Plan or Zoning district text and/or maps.
- g. presence on site of a Noise Corridor overlay designated in General Plan or Zoning district text and/or maps.
- h. annexation or rezoning is requested.

2. Permitted Density and Design

Where a Planned Development pattern is approved by the City the maximum density will be established as specified by the appropriate zoning district and as specified in these Land Development Policies in Part III below (Design Policies for Environmental Conditions Requiring Planned Development Pattern)

III. Design Policies For Environmental Conditions Requiring Planned Development Pattern

A. DEVELOPMENT PROHIBITED IN CERTAIN AREAS:

Plans must be submitted to the City demonstrating that the following areas will not be disturbed:

- 1. Areas with a natural (undisturbed by human activity) slope of 20% or more.
- 2. Areas within a 100 year floodplain as delineated on the current Flood Insurance Rate maps (F.I.R.M.) published by the Federal emergency Management Administration.
- 3. Areas within the boundaries of the 100 year flood level of any seasonal stream or drainageway if such a boundary is not delineated on the F.I.R.M. described in number 2 above.
- 4. Areas between the tops of banks of seasonal or year-round creeks, sloughs, streams, drainageways or oxbows.
- 5. Areas within wetlands as defined by the U.S. Army Corp of Engineers.
- 6. Areas within riparian habitat or zones as delineated on maps or as defined in text adopted by the city.
- 7. Areas within fifty (50) feet of the areas described in No. 2, 3, 4, 5 and 6 above.

Exception: The reason for granting an exception to this standard is to avoid loss of all development density if 100% of small lots exist in the areas listed in 1-7 above. After making appropriate findings and approving a Planned Development Use Permit the Planning Commission may allow development of the areas listed in 1-7 above. Any such areas that are disturbed must be replaced with environmentally equivalent systems. The Planning Commission does not have the authority to override Federal or State regulations and conditions.

Subdivisions shall not create lots that consist entirely of the areas listed in 1-7 above.

B. Densities Within Greenways and Wooded Areas

Greenways are defined as continuous canopy of woodland which is found along and with varying distance adjacent to stream corridors or wetlands. They are dependent upon available groundwater near the surface in these low lying zones. These belts of wooded land are mapped as an overlay to the Land Use Map.

Wooded areas may be found in upland or other rolling terrain in the northern portion of the City where historically grazing or less active use of the land has occurred. Coverage is generally continuous with open canopies on hilltops and frequently closed canopies in deeper ravines.

Where native stands of trees exist and mature individuals have trunk diameters equalling or exceeding 6 inches at three feet above the ground steps must be taken in project design and during site improvements to preserve the integrity of the stand. Each mature tree should be indicated on the development plan and areas of closed crown woodland and of open non-treed area shall be indicated.

In order to preserve established tree cover, to preserve the wooded character of the site, the City will require the developer to modify the development pattern.

Cluster Development

The City may allow unit development to be clustered at several locations, at higher densities in each, to avoid development in tree cover that would significantly reduce the wooded character of the site. The Commission will review a cluster development plan to insure its compatibility with other land development policies.

C. Densities Within Designated Greenways and Floodplains

Where Greenway or Floodplain overlays have been indicated on the Land Use Map the City will require that part or all of the overlay zone be left undeveloped and unimproved. Project plans, designed under the requirements of a Planned Development Use Permit, must be submitted. These plans shall show drainage, riparian habitat, watercourses, 100 year floodway and floodplain, wetland areas, degree of slope, unstable surfaces and areas of other potential geologic hazard. The project plans must show how the undisturbed areas will be left in their natural state in the development process by creative design or use of lower densities.

D. Densities Within Noise Corridors

A noise corridor overlay is designated for all residential districts through which freeway, State highway or active railway rights-of-way are present. The corridor overlay shall require, at the discretion of the Planning Commission, a noise buffer between the noise source and occupied structures within the proposed development area. Use of the buffer zone will be required to comply with the criteria set out in the Noise Element of the Red Bluff General Plan. The criteria includes buffer zone dimensions for each affected roadway and railroad corridor, and acceptable techniques to be used within the buffers.

RESERVED

IV. Lot Coverage

For the purpose of increasing rainfall infiltration and reducing storm runoff a minimum percentage of the development lot area should be left in open space. Development plans shall be submitted showing the proportion of each development lot which will be left unimproved or with previous surfaces. The portion of this type of area is inversely related to development density. (Cluster or density transfer sites in Planned Development projects will be exempted from these provisions with approval of the Planning Commission.) The percent of each lot which must remain in pervious open space for each zoning density district follows:

Zoning District	Minimum Open Space
R-1	50%
R-2	40%
R-3	33%
R-4	25%

V. Lot or Site Improvements

Development shall conform to Lot or Site Improvement Plans submitted to the City. The plans shall show resident workspaces, childrens shaded play areas(s) and landscaped areas as described below.

A. Resident Work Space

In each residential development (other than detached single family dwellings) an improved exterior work area is required where tenants can perform activities unobtrusively. Such activities include washing vehicles without obstructing traffic circulation through the parking lot or water spraying other vehicles. A space equivalent to the area of one parking space for each four units is required unless specified otherwise by the Planning Commission.

B. Children's Play Areas

In each residential development, (other than detached single family dwellings) a summer shaded children's play area is required. The area maybe shaded with vegetation (trees/vines) or structures (trellis/roof). The play area shall include playground equipment, a sandbox and surrounding free play space of at least 900 square feet for each 12 units or fraction thereof within a project unless specified otherwise by the Planning Commission.

C. Landscaping

Each project site shall be landscaped with non-poisonous native vegetation and native or non-native decorative plants to improve the aesthetics of the site.

VI. Fiscal Impact Assessment

Development will not be subsidized by the City. The City will require that the proponents of a development project prepare a fiscal impact analysis identifying the short and long term costs of providing City maintenance and services, the short and long term revenues to be generated by the project to the City and the net benefit or cost to the City.

In the case of a net cost to the City, the proponents must submit a long term plan for financing the fiscal deficit to the City. The proponents should consider all practical options and be prepared to implement and subsidize those options (e.g. assessment districts, user fee schedules, service district formation, private assumption of debt and service costs or other mechanisms) to insure a sustained independent responsibility for the short and long term costs of the development.

2. GRADING, DRAINAGE AND GROUND COVER POLICIES

I. PURPOSE

The purpose of these policies is to promote site development practices that will preserve the natural physical site characteristics of development sites in especially sensitive areas of the City of Red Bluff. These include hillsides, greenways, wooded areas, streams and drainageways. The policies are intended to encourage the use of alternative designs which are less disruptive to those natural areas. They expect that as a part of the design and review process the developer will address physical site characteristics. They are intended to provide design guidelines, during the preparation of preliminary development plans, to preserve the natural character of new growth sites in the City. These policies address issues including maintenance of natural topography, vegetation, erosion control and the off-site environmental impacts of development. They are not intended to dictate design, rather to promote an environmentally sensitive and less costly approach to site planning.

In the case that existing allowable building densities are in conflict with the policies of site conservation every effort will be made by the City to allow density transfer within the site to less environmentally sensitive areas. Proponents of development may be permitted, within the site, by use of Planned Development Use Permit, through subdivision maps, use permits and variances, to vary lot size and placement, street width, improvements' requirements and waiver of open space dedication requirements.

These policies are intended to supplement existing standards in the City's Design Review Guidelines and Appendix Chapter 70 [Grading] of the Uniform Building Code, Flood Damage Prevention Regulations [Chapter 26 City Code], and Subdivision Standards (Chapters 20 and 20A City Code). City staff and the planning commission will refer to these combined Policies and Guidelines when reviewing plans for proposed development. These policies may affect all existing plans for as yet undeveloped lands within the City.

The City is willing to discuss alternative development strategies including density transfer, building clustering, zoning variances and other alternatives to achieve the aims set out in this strategy.

II. LEAD STAFF AND PLANS

The Community Development Department shall act as lead staff to coordinate inter-departmental review of development activities subject to these policies. It shall also be responsible for monitoring compliance with development conditions that follow from the application of the policies.

As part of the development plan preparation and review process applicants may be expected to submit mapped information regarding physical site characteristics including: natural site contours, existing seasonal drainage channels, locations of trees with a significant diameter or high density stand, areas of existing erosion, steep slopes and significant existing natural wildlife habitat. City staff may require proposed grading plans, vegetation removal or replacement plans, run-off abatement and erosion control plans, landscaping and maintenance plans or other information to insure compliance with imposed development conditions consistent with these policies and standards.

III. APPEALS

Technical Advisory Committee decisions regarding the application of these policies and guidelines (including those elsewhere published) may be appealed in writing to the appropriate body.

IV. GRADING POLICIES

Development shall conform to Grading Plans submitted for city review. The grading plans must conform to at least the criteria listed below:

- A. Existing Site Character: Development shall be designed to minimize cut and fill operations, avoid disturbing natural drainage courses, riparian habitat, historic resources (e.g., archaeological sites, historic buildings, etc.), scenic qualities and existing vegetation where possible.
- B. Cuts and Fills: Earth cuts and fills shall blend with natural surface contours wherever possible. Cuts and fills shall be finished with curved rather than planed surfaces. The surfaces of all disturbed areas shall be stabilized. Natural contours on unbuilt surfaces shall not be disturbed. Fill materials shall not encroach upon floodways, drainageways, protected trees, adjacent lots or properties nor may they create unstable or erodable surfaces. Engineered fills are subject to approval by the Technical Advisory Committee.

Cuts and fills shall be accomplished on the site to minimize net gain or loss of native materials except to accomodate flood protection and to mitigate noise, light or other impacts. When basements or split levels are constructed to lessen impervious site coverage, excess excavated materials that cannot be stabilized on the site may be removed.

Only the surface of native soils shall be used as surface fill to support vegetation. Surface cover soils shall contain organic materials that will support re-establishment of desirable native grasses or plants. No fill materials may contain debris, e.g., concrete, asphalt or other waste materials or any toxics or pollutants harmful to native plants or soil microorganisms. Concrete, rocks and other inert, natural or fabricated material may be placed on steep slopes for erosion control or used as subsurface fill material when installed in a manner that conforms to plans approved by the City.

- C. Embankments: Site design shall not promote surface erosion or earth flows.

Development shall be designed and graded to assure that the boundaries of lots are a safe distance from cut and fill embankments. Long term responsibility for bank stability shall remain with property owners.

- D. Roads and Building Pads: Roadway alignments and building siting shall follow natural surfaces wherever possible. The integrity of grade access and egress from the building site and building pads shall be preserved. Right-of-way and utility improvements shall follow natural contours where possible.

V. VEGETATION PRESERVATION, REPLACEMENT AND NEW SPECIES INTRODUCTION

Development shall conform to Vegetation Plans submitted for City review. Vegetation preservation and introduction plans shall conform to at least the criteria listed below.

- A. **Preservation:** Where surface grading is not required for buildings, facilities or improvements consistent with these policies, non-hazardous and desirable natural vegetation shall be left undisturbed on the site. Trees or shrubs shall not be removed prior to submission and approval of development plans except for weed mowing abatement procedures. Development plans which minimize disruption of desirable natural vegetation are necessary.

Streets, buildings and utilities must be aligned away from rare or scenic species. A mixture of large native trees and young trees must be preserved to assure continuation of the species and a balanced landscape as older trees are removed during the life of the project.

- B. **Replacement:** If natural vegetation is lost or damaged the same species shall be reintroduced to restore original cover as closely as possible. Restore as much of the original vegetation character as possible. Native Oak trees with a diameter of 6 inches or more at 3 feet above grade, if removed for development, shall be replaced on or off site with the same species or other species approved by the city.

- C. **New Vegetation:** New vegetation shall be planted on the development site. It shall be established on all surfaces where cuts and fills have been created. Trees shall be planted and maintained on sites of new construction or building alteration to improve area aesthetics and introduce shade to buildings and parking areas.

1. **Yards:** If trees have not been preserved on a residential lot at least two shall be planted in each street frontage yard. In nonresidential yards trees shall be planted in street frontage yards at not more than 30 feet on center. (By comparison, trees on the south side of Walnut St. between Robinson Dr. and Scottsdale Ave. are spaced approximately 30 feet on center.)
2. **Commercial Space:** Trees or shrubs shall be planted adjacent to sound attenuation walls and walls of commercial, professional and multi-family residential buildings. (This will create visual breaks of the building line.)
3. **Parking Lots:** Trees shall be planted in parking lots of an average density of not less than one tree per 3600 square feet (approximately 60 feet on center). The mature crown of the tree shall shade at least 50% of the surface area of the parking spaces. The planter area for each tree shall not be smaller than the area of one non-compact auto parking space. The trees required in subsection C-4 below ("street rights-of-way") shall not be included in the count of trees required to conform to this section.
4. **Street Rights-of-Way:** Grass, shrubs and trees shall be planted along right-of-way margins to stabilize soil and inhibit surface run-off. (See unplanted cut and fill exposures along north Monroe Ave. and South Main Street) Developers should maintain vegetation until such time as the exposures are stabilized.

5. Maintenance of Planted Vegetation: Development Plans shall include a statement that the owner shall be responsible for irrigating planted vegetation species until they become self-sustaining. Drought resistant species shall be planted to insure their long term survival in areas where no permanent irrigation is provided. (Lists of recommended species are available in the Community Development Department.) Landscape maintenance plans shall be prepared by a qualified professional.

VI. DRAINAGE

Development shall conform to Drainage Plans submitted for city review. Drainage plans shall conform to at least the criteria listed below.

- A. Natural Drainageways: Natural stream channels, floodways drainageways and riparian habitat shall be unaltered by grading. The storm water run-off capacity and the riparian water retention characteristics shall be left intact to maintain the natural hydrologic characteristics of the site.
- B. Run-off and Erosion Control: Run-off calculations, the design of drainage works and water retention or diversion systems shall be prepared by qualified personnel. Any construction or grading which causes damming of storm run-off, including water retention or erosion control shall be reviewed by the City.

Drainage calculations shall include an analysis of impacts on off-site drainageways, especially the likelihood of erosion or siltation. The analysis shall include recommendations for natural, alternative, erosion control measures. These measures shall be designed by qualified personnel. Recorded easements will be required if artificial subsurface facilities or diverted surface drainage cross property lines.

Where induced run-off is diverted into artificial underground drainage systems, the developer shall restore the the natural condition of the surface drainageway. No construction, except engineered, artificial, underground drain systems, shall be designed for the drainage way and a easement shall be established on the affected private lots.

- C. Materials and Methods: Developers must use vegetation and natural materials within drainageways in the design of erosion control and drainage features. Concrete and metallic materials may be used when a qualified professional demonstrates that vegetation, rocks, gabions and other natural material will not effectively control erosion.

Creation of undrained areas outside natural drainageways through building and grading practice is not allowed. Residual fill materials moved to development site perimeters often have this effect and will not be permitted.

- D. Debris: Owners must remove abandoned vehicles, vehicle parts, building components, construction materials, pollutants and other non-natural debris from the development site and within drainageways. (See section IV B regarding recycling inert waste for erosion control.

VII. GENERAL PROVISIONS AND EXCEPTIONS

Applicability: These policies apply to grading activities and vegetation and drainage issues regardless of whether a project is exempt from provisions of the Uniform Building Code, Appendix Chapter 70.

Gravel extraction may be permitted in natural drainageways, (with approved excavation permits) if performed in a manner that conforms to plans and/or studies approved by local, State or Federal government agencies. (By example, the State Dept. of Water Resources encourages excavations in the Reed's Creek bed to increase flow capacity.)

Responsibility for planting and maintaining vegetation until the site is sold remains with the developer. After the site is sold the owner is responsible for maintaining vegetation in a manner approved by the City.

The City may require an EIR or an expanded initial study to address these policies or standards in any land subdivision or development and for reference during the mitigation monitoring process.

VIII. SUGGESTED IMPLEMENTATION MEASURES

Grade Retaining Facilities: To protect vegetation from adjacent fill or excavation the developer is encouraged to construct retaining wall devices or stabilized banks near the vegetation.

Erosion Control: The developer is encouraged to use vegetation and natural materials to inhibit erosion. (See VI C above) (He/she is encouraged to use gabions, retention basins, low profile check dams, wood crib walls and brush wiers to retain run-off and reduce erosion from the site.) The California Department of Water Resources or other qualified personnel may provide useful direction in this regard.

Sloping Lots: Construct homes with stepped foundations and wood floors. Also, construct detached or attached garages or accessory buildings with floor elevations at local grade and not necessarily at house floor elevation. To minimize grading and impervious cover construct common driveways to serve more than one lot. Provide at-grade driveway access.

Construct two story or split level structures to reduce building "footprint" size.

Cluster buildings or increase lot densities on level terrain to reduce densities on steep or heavily vegetated land. Use of zoning alternatives will facilitate this.

When conditions permit, consideration may be given to narrower streets and possible elimination of sidewalks. This would require Public Works and Public Safety Departments approval.

Building pads should be graded immediately prior to construction rather than during initial phases of the project to minimize erosion due to long exposure of soil to wind and rain.

Reference Material: Developers may wish to consult the documents listed below (copies available at City Hall):

Controlling Erosion on Construction Sites; U.S. Department of Agriculture, Soil Conservation Service, Agriculture Information Bulletin 347.

Homesite Construction and Maintenance Tips; U.S. Department of Agriculture, Soil Conservation Service.

Other information is available at the Community Development Department.

CITY OF RED BLUFF
LAND USE ELEMENT
INTERIM ANNEXATION POLICIES

AREA REQUISITES

Before the City will consider annexation, the prospective area shall qualify by virtue of its location and demographic attributes. Applications for annexation will first be reviewed by the City for conformance with the following:

1. The proposed annexation area shall constitute a geographic unit. It shall be defined by streets , continuous urban development that is consistent with Red Bluff Policies and Standards, adequate surface drainage and adequate access to area public services. All property shall have street access.
2. State law requires that the proposed area must lie within or adjacent to the City Sphere of Influence. Prior to annexation it must be brought within the Sphere.
3. The area must support urban densities comparable to or greater than those found within the lowest densities in the City.

AREA ENVIRONMENTAL AND FISCAL ASSESSMENT

The City will require the proponents of annexation to submit environmental and fiscal assessments of impacts on the City and the area environment, facilities and services. Proponents of annexation should pay the cost of preparation of the following supporting documents:

1. Environmental Impact Report

The City will require that the area residents finance a professional environmental report, contracted through the City of Red Bluff. The EIR be focused on the effects of annexation on agricultural land conversion, water quality, on resource impacts, and other impacts identified by the City.

2. Fiscal Impact Analysis

The City will require that the proponents of an annexation prepare a fiscal impact analysis identifying the short and long term costs of infrastructure improvements, urban services, facilities and maintenance. The analysis will include the short and long term revenue to be generated by the proposed annexation and the net cost or fiscal benefit to the City.

In the case of a net cost to the City, the proponents will submit a long term plan for financing the fiscal deficit to the City. The proponents will consider options and be prepared to implement and subsidize options such as creating assessment districts, user fee schedules, service district formation, private assumption of debt and services costs or other mechanisms to insure a sustained local responsibility for the costs of annexation.

URBAN IMPROVEMENT STANDARDS

The City will impose infrastructure and urban facilities improvements standards similar to those required in the City subdivision and development approval process, including dedications, exactions and impact fees within the area of proposed annexation. The proponents will also be required to finance the infrastructure improvements to levels of City standards under a phased development agreement with the City. Such infrastructure and improvements could include streets, water, sewer, storm drains, flood protection, fire protection, conformance to City street signing, lighting, naming and numbering, recreation facilities, nuisance abatement and correction of local conditions which threaten public health. These will include correction or mitigation of substandard housing, accumulation of trash or debris, abandoned vehicles or junk, non-conforming uses and other nuisances or hazardous conditions.

ADMINISTRATIVE REQUIREMENTS

Prior to approval of an annexation application, proponents must comply with all necessary procedural requirements. These will include the following:

1. Proponents will apply to prezone the area consistent with the City General Plan.
2. Proponents will submit copies of all county service agreements, development agreements and statements of area fiscal liability.
3. The City will require the proponents to provide for mitigation of the effects of annexation without recourse to statements of overriding consideration.

Glossary of Terms

Acreage, Gross	Total Acreage on a Project Site Including Public Dedications Excluding Existing Rights of Way
Aesthetic Resources	Public Resources Including Scenic, Sound, Smelled Characteristics of a Place (Difficult to Quantify Yet Critical to Local Character)
Approach Zone	Area Extending 10,000 Feet Beyond the End of an Airport Runway Where Inbound or Outbound Aircraft May Overfly the Surface By Several Hundred Feet Creating Potential Public Hazard and High Levels of Noise (See Airport Land Use Plan)
Biotic Resources	Natural Living Species Including All Plants and Animals in Water, Air, Soil and on Land Environments
Buildable Area, Gross	The Largest Area on Which Structures May Be Placed Excluding Public Rights-of-Way, Easements and Restrictions Imposed by Floodplains, Vegetation Cover and Slopes Exceeding 9.9%
Buffer Zone	A Strip of Land Separating a Conflicting Land Use Nuisance or Noise Source Which May Contain Visual Screening or Noise Attenuating Landscaping or Structures
Clear Zone	A 1,700 Foot Long Wedge of Open, Unused Land Extending Outward From the End of a Runway Kept Clear Due to Potential Air Traffic Hazard (See Airport Land Use Plan)
Cluster Development	A Close Arrangement of Buildings in Groups Intended to Leave Open Land Around Them For Scenic and Recreational Benefits
Density	Number of units per acre as developed
Density, Allowable	Number of Units Per Acre Allowed By Right in the Zoning District
Density Bonus	Additional Densities Allowed Over Those Allowed in the Zoning District.
Developable Area, Gross	The Total Land Area Which May Be Developed Excluding Public Rights-of-Way, Extreme Slope and Flood Hazard Areas and Areas Reserved for Preservation for Public Purposes

Floating District	Zoning Provisions Not Described as a Map District But Which May Be Overlaid to, and Make More Flexible, a Particular Map District
Floodplain	The Corridor Along A river, creek, stream or drainage way which Receives Floodwaters From the River, Often Marked By the Flood Level Expected Every 100 Years
Floodway	The Annual Flood Channel of a River, creek, stream or drainage way.
General Plan Guidelines	A Local Planning Guide Published by the State Office of Planning and Research
Goal	A Desirable Future Condition Toward Which Current Planning and other Public Policy Actions Will Move the Community - Generally an Ideal Never Completely Attained
Greenway	A Continuous Canopy of Woodland Which is Found Along and With Varying Distance Adjacent to Stream Corridors or Wetlands. Greenways include riparian habitat
Habitat	The Living Environment for One or An Association of Species
Hazard	A Natural Environmental Phenomena Dangerous to Life, Health or Property
Implementation Measure	A Specific Decision, Ordinance or Action Which Puts a Program Into Effect
Infrastructure	The Public System of Improvements Which Permits Movement of Goods, People or Information (e.g. Roads, Railroads, Ports, Airports, Sidewalks, Water, Gas, Power, Telephone, Sewer Lines)
Land Use Designation	A One to Four Letter Code Indicating the General Class of Land Use Allowable in the Area
Land Use Map	A Map of the Community Indicating Allowable Land Uses by Class. Also Termed a Land Use Diagram
Noise Attenuation Devices	Any Device Which Will Absorb or Deflect Noise to Prevent Nuisance in a Residential or Public Area (e.g. Earthen Berms, Masonry Walls)
Noise Corridor	A Corridor Along Both Sides of a Noise Source as a Railroad, Highway, Airport Approach, Designated by a Particular Decibel Sound Level
Nuisance	Any of a List of Sounds, Materials, Visual Scenes, Smells, Light or Physical Danger Which Threaten the Health or Safety of Persons Living in a Place or Using a Public Right-of-Way

Objective	A Measureable Expectation or Desire That Can be Accomplished Through Implementation of Plans, Ordinances or Actions
Open Space	Any Parcel of Land or Water Which is Unimproved. Also Landscaped Area as defined in the City's Zoning Regulations
Overlay District	An Additional Level of Regulation Which is Superimposed on a Zoning District or General Plan map or text
Planned Development	A Development Project Which Includes Nontraditional Design and Is Permitted In Place of Uniform Zoning Guidelines Yet Meets the General Intent, Overall Density and Public Needs of Zoning. Also, a Planned Development Use Permit.
Planning Area	Any Land Outside the Boundary of the City's Jurisdiction Which Bears Relation to Its Planning
Policy	A Statement of Intent Which Should Be Used By Planners To Guide Planning Decisions
Slope Density	A Provision That Reduces Allowable Building Density With Increasing Slope to Limit Erosion Potential, Structural Failure and Damage from Natural Hazards
Sphere-of-Influence	The Probable Ultimate Physical Boundary and Service Area of the City
Uniform Development	A Proposed Design of Units or Buildings Spread Evenly Across a Parcel of Land
Vehicle Trip Generation	The Number of Person or Vehicular Trips Expected to Originate Daily From a Building or Place

C.

NEGATIVE DECLARATION AND INITIAL STUDY

CITY OF RED BLUFF

NEGATIVE DECLARATION - ENVIRONMENTAL IMPACT

PROJECT: Adopt 1993 Housing, Land Use and Natural Environment
Elements of the City's General Plan

LOCATION: City wide

OWNER: N/A

APPLICANT: City of Red Bluff

PROPOSED USE: All Uses

LAND USE: All Land Use Classification

ZONE: All Zoning Districts

PROJECT

DESCRIPTION: Update existing 1986 Housing Element, and 1974 Land Use,
Open Space and Conservation Elements of the City's General
Plan

INITIAL STUDY: An Initial Study of this project was undertaken and
prepared in accordance with the City's Environmental Guidelines for the
purpose of ascertaining whether this project might have a significant effect on
the environment. A copy of the initial study is attached. Such initial study
documents reasons to support the findings noted below.

FINDINGS: The City finds that the Initial Study and consultation with all
Responsible Agencies confirms that the project will not have a substantial
adverse effect upon the environment.

City policies within the General Plan are Mitigation Measures. See also, the
attached Initial Study dated June 1, 1993 for a discussion of Impacts and
effects.

TECHNICAL ADVISORY COMMITTEE

Gary Antone
Richard A. Bull
Dennis W. Fischer
Charles E. Hayden
Harold J. Lucas

June 1, 1993

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INITIAL STUDY AND NEGATIVE DECLARATION
RED BLUFF GENERAL PLAN LAND USE, HOUSING
AND NATURAL ENVIRONMENT ELEMENTS

CITY OF RED BLUFF, CALIFORNIA

INTRODUCTION

This Initial Study has been prepared by Dr. Donald Holtgrieve for the City of Red Bluff in order to assess the environmental effects of the newly adopted Housing, Land Use, and Natural Environment Elements of the Red Bluff General Plan. It is intended to satisfy the requirements of the California Environmental Quality Act (CEQA), and to provide the City with adequate information to assess the effects of its new General Plan policies and programs.

CEQA requires that an Initial Study be prepared to assess any potentially significant environmental impacts associated with a development project or program. If technically feasible mitigation measures are identified for all significant impacts and a Negative Declaration may be prepared, thereby completing the environmental review process. A Negative Declaration may not be approved by the City in cases where impacts can not be adequately mitigated. In such cases the City must require the preparation and review of an Environmental Impact Report.

This Initial Study includes a short project description and an environmental checklist with impact analysis for all items on the checklist that have been identified as issues for consideration. The General Plan itself constitutes the full project description and predicted impacts are based on the implementation of its stated goals, policies and implementation measures. Several documents are referred to in this initial study. All of the referenced documents are incorporated into the General Plan "project" by reference. They include various City maps, ordinances, standards and reference documents. Copies of these documents are available on request from the City Community Development Department.

This study concludes that with the adoption of the mitigation measures identified, the project will not cause or create any significant adverse environmental effects. If the City Council finds that the implementation of the General Plan Elements will not cause significant adverse impacts on the environment, a Negative Declaration will be approved.

This study was performed based upon information gathered from City staff, other public agencies, site inspections, and various City and State documents as cited.

CITY OF RED BLUFF
INITIAL STUDY AND DEVELOPMENT IMPACT CHECKLIST
(To Be completed by Staff)

I. Background

1. **Name of Project, if applicable:** City Of Red Bluff
General Plan, Land Use, Housing and Natural
Environment Elements
2. **Address of Project:** Red Bluff City Hall
555 Washington Street, Red Bluff, California
96080
3. **Name of applicant:** City of Red Bluff
4. **Address and phone number of applicant:** PO Box
400, Red Bluff CA 96080 (916) 527-2605
5. **City Contact:** Charles Hayden, Community
Development Director

II. Project Description

The physical characteristics of the City are described in the Land Use and Natural Environment Elements of the General Plan. The social and economic characteristics of the community are described in the Land Use and Housing Elements. Specific characteristics of the City such as transportation facilities, natural hazards, and noise sources are found in the already approved Circulation Element and the Safety and Noise Elements to be reviewed and approved within the next two months.

The Land Use Element identifies the spatial arrangement of existing and proposed uses of the land including public lands and facilities. It lays out the distribution of classes of land use, the intensity of those uses and proposes a strategy of goals, objectives, policies and implementation measures to promote a wise use of land to promote the welfare of the community. A goal is an unquantified ideal future condition toward which the community works. Objectives are measurable and expected outcomes. Policies are statements which are used to guide decisions and implementation measures are specific actions, programs, techniques which are meant to bring about change or a desired result. The measures are intended to carry out the plan and are the primary subject of evaluation of potential environmental impacts in this Initial Study.

The study area for the General Plan and the Initial Study includes the corporate limits and the sphere-of-influence of the City which surrounds the corporate limits. These boundaries and the land uses within them are presented in the Land Use Map found within the Land Use Element. Large copies of the Land Use Map are available for examination at the City Community Development Department.

The Housing Element provides information about present housing conditions in the community, identifies needs and opportunities for the development of improved housing and provides a setting for future decision making about housing issues. As with the Land Use Element, the Housing Element provides goals, policies, objectives and implementation measures for City Council guidance. Again, the subject of this Initial Study is the specific implementation measures that could or will change the local environment.

The Natural Environment Element of the General Plan constitutes the required Conservation and Open Space components of California's general plan requirements. Resources discussed in the Natural Environment Element are: vegetation, wildlife, endangered species, water, geology, soils, air quality, minerals and open space. As with the other Elements, this initial study evaluates potential impacts of plan implementation.

For major development projects that are proposed in the City of Red Bluff this General Plan environmental analysis may be considered the first stage of a tiered environmental review process. When specific details of new major development projects are submitted to the City an initial study in conformance with the California Environmental Quality Act is prepared. The initial study may identify the need for preparation of a focused environmental impact report or may, in itself, contain necessary background information and proper mitigation measures so as to file a Negative Declaration. The "mitigated" negative declaration most often will contain wording that may become a list of specific conditions for permit approval.

III. Environmental Impacts (Explanations of all "yes" and "maybe" answers are required.) Enter "E" for Effect. Enter "S" for Significant.

Yes Maybe No

1. Earth. Without mitigation, will the proposal result in:

a. Unstable earth conditions or in change in geologic substructures.

_____X_____

Section VI of the Natural Environment Element addresses area wide geology and soils. All major geological formations and soil types are described. The goals, objectives and policies presented in the Element stated implementation measures include use of an extensive list of development conditions for new proposed new development. Among the conditions are mitigations for potential impacts of soil loss, soil erosion, loss of prime agricultural soils, and modification of geologic conditions. The standard conditions are available for examination at the office of the community development director.

The land use Element calls for Land Development Policies and Grading, Drainage and Ground Cover Policies. These policies for land development are incorporated into the Land Use Element and are available for examination at the Community Development Department office. They are given to applicants for new development projects and used as a basis for evaluation of project proposals by the Planning Commission and City Council.

b. Disruptions, displacements, compaction or over covering of the soil?

_____X_____

Without mitigation, development grading could expose soil to potential erosion, displace or compact natural soils. Individual project review at the Initial Study stage of the CEQA process will identify such potential impacts and those impacts would be mitigated to insignificant levels of impact through imposition of conditions for approval and other mitigations as may be identified in the Environmental Review process. In major development projects a geotechnical investigation report is normally required. These reports also contain suggested mitigation measures which can be incorporated into conditions for permit approval. In addition, the Uniform Building Code includes standards for construction of foundations.

c. Change in topography or ground surface relief features?

_____X_____

Some development projects will change local conditions of topography and surface relief. However, these changes shall not constitute a significant adverse impact on the environment if the above mitigations in sections 1a and 1b are implemented.

- d. The destruction, covering or modification of any unique geologic or physical features?

Yes Maybe No

 X

A description of geologic and physical features in the Red Bluff area is in Section VI of the Natural Environment of the General Plan. There are no unique geologic or other physical features which merit special preservation efforts in or near the city planning area.

- e. Any increase in wind or water erosion of soils, either on or off the site?

 X

As explained in items 1a and 1b above, all applications for development projects will be subject to tiered environmental review wherein projects that have potential for causing erosion will be subject to special studies and mitigation through conformance to city grading, drainage and ground cover policies as specified in the land use Element identified in Initial Studies and adopted as part of required development permits.

- f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition, or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?

 X

The major water body in the City is the Sacramento River. Land use and development along its banks or floodplain are strictly regulated with an overlay zone that may require that part or all of the zone be left undeveloped and unimproved (see Land Development Policies). Items 1a-e above also address this topic.

- g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mud slides, ground failure, or similar hazards?

 X

A review of California Division and Mines and Geology Special Studies Zones maps indicates that the City of Red Bluff is not subject to greater than average geologic and seismic hazards in the area. Development of all lands in the City must conform to policies in the Seismic Safety Element of the City of Red Bluff General Plan, land development policies in the Land Use Element, and conditions for permit approval as identified in the environmental review process for new projects. These measures will, singularly and in combination, identify and mitigate potential problems of earthquake hazard, landslide or ground failure.

2. Air. Will the proposal result in: Yes Maybe No

a. Substantial air emissions or deterioration of ambient air quality? _____ X _____

Issues of climate and local air quality are discussed in Section VII of the Natural Environment Element of the General Plan. The Element notes that Tehama County is designated as a non-attainment area for ozone and PM10 (particulate matter). A stated objective of the City General Plan is to achieve and maintain "attainment area" status for all four major air quality criteria. This will be accomplished in conjunction with other north valley communities by putting into effect the implementation measures listed in the Natural Environment Element and the Circulation Element of the General Plan. The most effective of these measures are those that reduce total vehicle miles traveled in the region. These transportation systems management (TSM) measures have yet to be approved by the City Council in the form of a TSM Ordinance.

The City's environmental review process calls for preliminary estimates of air pollution impacts from new projects. Where it is seen to be possible that a project will cause air quality levels to deteriorate, a focused environmental impact report may be required. Also, in such cases the Tehama County Air Pollution Control District would become actively involved in the approval process.

Conditions for approval of land development projects often include such measures as obtaining a fugitive emission control permit, approval of a dust control plan, and watering of graded surfaces. Use of EPA certified Phase II wood stoves is also required in new home construction for reduction of particulate emissions.

Other mitigation measures for air quality impacts caused by motor vehicles are listed in section 13 of this initial study and in the programs portion of the Circulation Element of the General Plan beginning on page 40 of that document.

b. The creation of objectionable odors? _____ X _____

Approval of new industries, agricultural operations or other land uses that may create objectional odors is subject to the City's environmental review and permitting processes. However, there are currently no specific regulations for odor producing activities in the City nor is there a perceived immediate need for such regulations at the present time.

c. Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally? _____ X _____

There are no current nor are there any foreseen projects or activities in the City that would cause any of the above effects.

3. Water. Will the proposal result in:

- a. Changes in currents, or the course of direction of water movements, in either marine or fresh waters?**

Yes Maybe No

_____ X _____

Water resources in the City of Red Bluff are addressed in Section V. of the Natural Environment Element of the General Plan. Matters of water supply, consumption, and quality are discussed. Goals, objectives, policies and implementation measures intended for the protection of natural water features as well as water delivery systems are included. Any development plan that might include the modification of water movement would be subject to the City's environmental review process and a Fish and Game Code Section 1600 agreement with the State Fish and Game Department. Site specific impacts would be mitigated as a required component of these procedures.

- b. Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?**

_____ X _____

Without mitigation, the grading of streets, building pads, and other development features in new projects could change drainage patterns. Pavement, roofs, and other impermeable surfaces would decrease soil percolation and increase surface runoff. Runoff concentration time would increase and peak flood levels would increase slightly.

It is the intention of the City to prevent such impacts through the implementation of Land Development Policies Sections II B, III C and IV in Appendix A-1 of the Land Use Element. Likewise, it will implement Grading, Drainage and Ground Cover Policies Sections IV B and VIII B regarding runoff and erosion control.

A drainage impact study, an erosion and sediment control plan, a water quality and drainage facility design and maintenance plan are normally submitted to and approved by the City prior to any construction activities.

The mitigations in Section 3a of this document also apply to this section.

- c. Alterations to the course or flow of flood waters?

Yes	Maybe	No
_____	<u> X </u>	_____

See Items 3a and b above.

- d. Change in the amount of surface water in any water body?

_____	_____	<u> X </u>
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See items 3a and b above

- e. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?

_____	<u> X </u>	_____
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Grading during wet weather creates a high potential for siltation and turbidity of nearby waterways. Implementation of erosion and sediment control plans and drainage impact studies as listed in Items 1b and 3a,b and c above will mitigate this potential problem.

- f. Alteration of the direction or rate of flow of ground waters?

_____	_____	<u> X </u>
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The Natural Environment Element of the General Plan states that the City water supply comes from groundwater in the Sacramento Valley Groundwater Basin. Red Bank and Reed Creeks play an important role in groundwater recharge. The groundwater table is considered to be abundant with levels from 30 to 60 feet below surface elevation. The water table has remained relatively stable, even in the drought years, and it is not anticipated that there will be a water shortage in the near future. New development is not expected to intercept or impact any known aquifer.

- g. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?

_____	_____	<u> X </u>
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See item 3f above

- h. Substantial reduction in the amount of water otherwise available for public water supplies?

Yes Maybe No
_____ _____ X

Section V-C of the Natural Environment Element describes an abundant water supply for the City at least until the year 2000. Any new water consumptive projects such as a cannery or a brewery would be subject to CEQA review in which a water supply study with mitigations would be required.

- i. Exposure of people or property to water related hazards such as flooding or tidal waves?

_____ X _____

The Safety Element of the General Plan discusses the potential for flooding in Red Bluff and offers mitigation measures for such events. The land use Element identifies flood plain zones in the City and suggests mitigation measures to prevent damage from flooding. The effect of the floodway overlay designation will be to limit or condition any use of land within the zones. For purposes of maintaining public safety the City Land Development Policies and City Grading, Drainage and Ground Cover Policies will be implemented within these zones.

4. Plant Life. Will the proposal result in:

- a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, and aquatic plants)?

_____ X _____

Further development of vacant areas within the City planning area will remove an unknown number of mature oak trees in both the oak woodland and riparian zones. The potential loss of riparian communities especially along Reeds, Red Bank, Brickyard, Grasshopper, Brewery, Dibble and Blue Tent Creeks.

It is the declared intention of the City in its Land Use and Natural Environment Elements to preserve as many mature oak trees as possible. The oaks and other local vegetation communities are described in Section II of the Natural Environment Element. It states that the existing native vegetation in the area provides environmentally and socially valuable resources for the community. The Greenway and floodplain overlay zones in the Land Use Element provide considerable protection for oak woodland and riparian habitat areas. Implementa-

tion measures recommended in the Element for protection of native plant communities include public education, sensitive habitat surveys, a tree preservation ordinance, and use of the City Land Development and Grading, Drainage and Ground Cover Policies.

There are several standard conditions for development permit approval that are normally included as mitigations in the environmental review process such as provision of landscaping plans that exclude all lawns and sprinkler irrigation under the drip lines of oak trees. All activities that would compact the soil around the trees such as vehicle parking are also usually excluded. Where mature trees are unavoidably removed a replacement ratio of 2 to 1 or greater is usually required.

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
b. Reduction of the numbers of any unique, rare or endangered species of plants?	_____	<u>X</u>	_____

Section IV of the Natural Environment Element addresses the issue of endangered species in Red Bluff. With reference to the California Department of Fish and Game's Natural Diversity Data Base, a total of two rare plants were listed as occurring near the City planning area. They are Silky Crypatahtha and Red Bluff Dwarf Rush. A recommended mitigation measure to insure the discovery and survival of these plants is to carry out a survey of the planning area mapping all wetlands and other critical habitats and sensitive biotic communities. The results of the survey would be used as a reference in the environmental review process for new project applications.

c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?	_____	<u>X</u>	_____
---	-------	----------	-------

Landscaping and irrigation will significantly alter much of the vacant developable land in the City if or when it is developed. This process, in itself will not constitute a significant adverse impact if the City's Grading, Drainage and Ground Cover Policies are followed and planting with native species is encouraged. Specific review of development plans in the environmental review process will allow identification of significant introductions of exotic species that may pose problems.

d. Reduction in acreage of any agricultural crop?	_____	_____	<u>X</u>
--	-------	-------	----------

The Land Use Element of the General Plan states that loss of some agricultural land will occur with the development Adobe Road area near the Freeway. This occurrence is not seen as a significant adverse effect due to its small size and urban location.

5. Animal Life. Will the proposal result in:

- a. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic (bottom dwelling organisms) or insects?

Yes Maybe No

_____ X _____

The Natural Environment Element of the General Plan indicates that the majority of wildlife found within the Planning Area occurs in the waterways that bisect the area and in four biotic communities; oak woodlands, grasslands, riparian corridors and wetlands. These diverse habitats provide areas for breeding, nesting, feeding, and shelter to wildlife. Several fish, bird mammal and reptile species are listed and described in the Element. It is recommended that a wildlife survey be undertaken and that identified wildlife resources be protected through public education, conditions for development approval and developer incentives for projects which incorporate habitat protection into project design.

- b. Reduction of the numbers of unique, rare or endangered species of animals?

_____ _____ X _____

See Item 4b above. No State or Federally listed rare or endangered animal species are known or likely to exist in the City Sphere of Influence. However Bank Swallows and Valley Elderberry Longhorn Beetles have been located just outside the Planning Area. Specific site plan and development reviews and the environmental impact review process will provide evidence of the likelihood of endangered species in new project development sites.

- c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?

_____ _____ X _____

Without proper project management, domestic pets are introduced into the wildlife habitat areas. Cats and dogs sometimes prey on wild birds, rodents, or reptiles. The best mitigation for this potential impact is public education about the effects of pets on wildlife.

- d. Deterioration to existing fish or wildlife habitat?

_____ X _____

See Item 4 above. Wildlife habitats are currently protected by implementation of the City's Land Development and Grading, Drainage and Ground Cover Policies and site specific environmental review of new development proposals.

6. Noise. Will the proposal result in:

a. Increases in existing noise levels?

Yes Maybe No
_____ X _____

Expected growth and development in Red Bluff will increase ambient noise levels along principal arterials and collector roadways and will expose people to them. Increased populations are also expected to be subject to railroad and airport noises. The Noise Element of the Red Bluff General Plan identifies the major noise sources and maps the locations of sensitive receptors near them. City standards for acceptable noise levels are also presented in the Noise Element and mitigation measures necessary to meet the standards are offered. Other mitigations listed in the Land Use Element are: Implementation of Objectives III I and IV C which discourages residential development near principal roadways, railroads and the airport.

b. Exposure of people to severe noise levels?

_____ X _____

Noise studies are required of project development applications located near identified noise sources. Mitigation of noise impacts is required as part of the City environmental review process before the issuance of any building permits. Construction noises in early morning, late evening, or weekend hours that may cause complaints are mitigated by controlling working hours. The City is presently in the process of preparing a Noise Ordinance which will go before City Council review in the Summer of 1993.

7. Light and Glare. Will the proposal produce new light or glare?

_____ X _____

New street lighting and night traffic will increase light levels in the City but this will not create a significant negative impact on present or future residents of the area. Light and glare studies will be required of new project applications where problems are anticipated. Mitigations of potential impacts will meet approval by the City before issuance of building permits.

8. Land Use. Will the proposal result in a substantial alteration of the present or planned land use of an area?

Yes Maybe No
_____ _____ X

The Red Bluff Planning Area contains 1,500 developable acres of vacant land. Eventual development of these lands is assumed in the General Plan Land Use Element. Such development will be in accordance the City's land use distribution plan and will not conflict uses proposed by the County of Tehama. With the exception of the small acreage at Adobe Road there will be no conflict with agricultural uses of land in the area.

9. Natural Resources. Will the proposal result in increases in the rate of use of any natural resources?

_____ _____ X

Normal amounts of fuel, water, and construction materials will be used for the construction and occupancy of new developments in the City. This is not a significant adverse impact. The Natural Environment Element inventories the natural resources found in the City planning area and provides for their protection and wise use. The Element contains policies and implementation measures for managing vegetation, wildlife, water, soils, minerals, and open space resources.

10. Risk of Upset. Will the proposal involve:

- a. A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?

_____ X _____

The Safety Element of the Red Bluff General Plan includes an evaluation of risk due to explosion or release of hazardous substances. Plans for such emergencies are included and are compatible with those of the County Office of Emergency Services.

- b. Possible interference with an emergency response plan or an emergency evacuation plan?

_____ X _____

See item 10 a above.

11. **Population.** Will the proposal alter the location, distribution, density, or growth rate of the human population of an area? X

The Housing and Land Use Elements of the Red Bluff General Plan anticipate a planning area population of 20,000 persons in 8,000 households by the year 2000. The planning area has a reasonable population capacity of about 25,000 persons. The distributional effects of population growth will be development to south, west and north of the City. The major effect of this growth will be demand for adequate public utilities and services in those areas.

The goals, objectives and policies of the Land Use Element, implementation measures found in Section VIII of the Element and other measures contained in the City Zoning Code, Master Plan for Infrastructure and other plans are adequate mitigations for projected population growth effects.

12. **Housing.** Will the proposal affect existing housing, or create a demand for additional housing? X

The Housing Element of the Red Bluff General Plan presents current and future housing and neighborhood characteristics of the City Planning Area. Housing needs are particularly detailed and programs to meet those needs are proposed. All new residential development in the City is therefore carefully planned and potential impacts of that development are mitigated through the policies and programs set forth in the general plan. Population levels beyond those accounted for in the General plan are not predicted or anticipated.

13. **Transportation/Circulation.** Will the proposal result in:

- a. **Generation of substantial additional vehicular movement?** X

The effects of population and employment growth in terms of trip generation and distribution in the City of Red Bluff are presented in the Circulation Element of the General Plan. Levels of service at some intersections and roadways will be lowered. The Land Use Element addresses the environmental impacts of growth on circulation systems in Section III E. Nine areas in the community are highlighted for their effects of increased traffic. The principal effects are where road design capacities will be exceeded, congestion and delays experienced and pedestrian safety jeopardized. Suggested mitigations in both elements include: increasing land use densities and reducing urban sprawl, restrict and monitor heavy truck traffic, provide free-

way access at Adobe Road, Improve signalization along Antelope Boulevard, Main Street, Walton Avenue, Monroe Avenue, and Luther Road. Potential east-west routes should be identified and developed. Also suggested is completion of the City bikeway system, promotion of public transit and establishment of a transportation management association. All new development proposals are required to pay for infrastructure improvements that are necessary to keep levels of service above level C as a direct result their proposed project.

Yes Maybe No

b. Effects on existing parking facilities, or demand for new parking?

_____ _____ X

Parking requirements for new developments are set by City ordinance. At present, there are no serious parking problems in Red Bluff and it is anticipated that the effects of new developments on parking availability will be minimized through project environmental review and adherence to the City's parking standards. The Circulation Element suggests development of a truck parking ordinance so as to restrict parking on residential streets.

c. Substantial impact upon existing transportation systems?

_____ _____ X

The full development of vacant land in the City will include full development of the City's planned bikeway and pedestrian circulation systems. It is recommended in the Circulation Element that the City consider consider Transportation Systems Management (TSM) provisions to promote flex-time, van pools, bicycling, and other alternative transportation methods to employment destinations. It also calls for support of the public transit system particularly when population and demand are sufficient for such.

d. Alterations to present patterns of circulation or movement of people and/or goods?

_____ _____ X

See items 13 a-c above.

e. Alterations to waterborne, rail or air traffic?

_____ _____ X

f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?

_____ X _____

See item 13a-c above

14. **Public Services.** Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:

a. **Fire protection?** _____ X _____

The effects of population and economic growth on police and fire services will be significant. The ratio of police officers and fire-fighters will decrease with increases in City population unless mitigated. With an increase of about 2,300 persons over ten years an additional 3 police officers and 3 fire personnel will be required. Expansion of facilities will be necessary to accommodate the expansion of personnel, equipment and office requirements. The Safety Element of the General Plan addresses fire protection services in the City of Red Bluff. It is currently in the revision process and the new Element will contain mitigations for impacts of growth and development in the City.

b. **Police protection?** _____ X _____

See item 14 a above.

c. **Schools?** _____ X _____

Section V of the Land Use Element of the General Plan discusses the current status of school facilities and projected demands to be placed upon them with future population growth. It reports that the High School District is currently constructing portable classrooms to accommodate current and future enrollment increases. District administrators reported in the Spring of 1993 they are considering a bond issue to finance new facilities. Red Bluff Union School District was reported in the General Plan Land Use Element to be in a period of declining enrollments. This, however, may be a short term trend and with the projected population growth anticipated in the Housing and Land Use elements, more facilities will certainly be needed.

Mitigation of school enrollment impacts may be met with aid from the State of California, district impaction fees, bond financing or other more creative financing efforts. It is beyond the scope of the City's responsibility to financially assist the school districts.

d. **Parks or other recreational facilities?** _____ X _____

Section IV C of the Land Use Element describes existing and proposed recreation facilities and activities. In order to accommodate new populations the City will likely improve: Spaulding Acres, Forward Park Expansion, Jackson Heights School Property, and Kraft Playground.

**e. Maintenance of public facilities,
including roads?**

Yes Maybe No

_____ X _____

It is anticipated that increasing demands on the maintenance of City street and other facilities will be partially met with increased property and sales tax revenues. If this is not the case, reduction in levels of service and maintenance may be anticipated.

f. Other governmental services?

_____ X _____

For all of the above services the City will charge new developments various impact fees that have been developed and approved by City Council for the expressed purpose of offsetting development impacts in the City of Red Bluff.

15. Energy. Will the proposal result in:

**a. Use of substantial amounts of fuel or
energy?**

_____ X _____

The growth of population in the City of Red Bluff during the next ten years will have energy impacts from new housing, business, industry and for energy consumption by additional vehicle commuting. Increases in energy consumption may be unavoidable but might be minimized with the mitigations presented in the Circulation Element of the General Plan. Energy conservation may also be promoted through City, school and utility programs and advisories.

**b. Substantial increase in demand upon
existing sources or energy, or require
the development of new sources of energy?**

_____ _____ X

**16. Utilities. Will the proposal result in a need for
new systems, or substantial alterations to the
following utilities?**

a. Power and natural gas?

_____ X _____

As the City grows over the next few years new power and natural gas delivery systems will be required. These facilities and services are provided by Pacific Gas and Electric. New installation and service will be paid for by new project management. Thereafter, owners or tenants will pay for utilities services.

b. Communications?

_____ X _____

Conditions for project permit approvals include provision for telephone and cable television access. These services are provided by private companies and are not the responsibility of the City.

Yes Maybe No

c. Water?

_____ X _____

Although there is sufficient water supply and the distribution system is of adequate coverage, the preponderance of small diameter pipe or distance from well pumping stations has caused low water pressure during periods of peak demand. The City's utility master plan recommendations for the water system include construction of parallel mains, creation of a new pressure zone and an increase in reservoir storage capacity. These measures will mitigate near term growth impacts.

d. Sewer/Septic tanks?

_____ X _____

The City utilities master plan reports that many trunk sewer mains are deficient under wet weather conditions and many will have inadequate capacity at build out. The treatment plant has adequate secondary treatment capacity until 2010. The master plan recommends construction of a Monroe Street/Reeds Creek relief sewer, upgrading capacity of several pumping stations, sewer system repairs, and upgrading and improving equipment and processing systems at the recycling plant.

e. Storm drainage?

_____ X _____

See Items 1b and 3b.

f. Solid waste and disposal?

_____ X _____

The City presently relies on the Tehama County landfill for disposal of most of its solid waste. The landfill has capacity for several more years but the utility master plan calls for aggressive conservation measures as summarized in the Land Use Element.

17. Human Health. Will the proposal result in:

a. Creation of any health hazard or potential health hazard (excluding mental health)?

_____ _____ X

No health related effects resulting from the implementation of the City General Plan are foreseen. The City cooperates with Tehama County in the implementation of its Hazardous Waste Management Plan.

b. Exposure of people to potential health hazards? Yes Maybe No
_____ X _____

This project will not create or expose individuals to any potential health hazard.

18. Aesthetics. Will the proposal result in the obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an anesthetically offensive site open to public view?

_____ X _____

Future development in the City of Red Bluff includes the potential for degradation of the scenic environment. This potential impact may be mitigated with City adoption of a new development design guidelines, the creation of an architectural review board and design review of projects at the Initial Study stage of the project approval process.

19. Recreation. Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities?

_____ X _____

The effect of growth on recreational opportunities are minimal. Adequate space and scope of activities will meet growth in demand. See also item 14 d above.

20. Cultural Resources.

a. Will the proposal result in the alteration of or the destruction of a prehistoric or historical archaeological site?

_____ X _____

A complete inventory of archaeological and historical features in the City is necessary before this question can be answered with certainty. Individual project reviews will include a literature search at the Center for Cultural Resources at California State University, Chico. If potential cultural resources are uncovered during development operations, the Anthropology Department at California State University, Chico should be contacted for evaluation of the circumstances.

b. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?

_____ X _____

See item 20 a above

Yes Maybe No

- c. Does the proposal have the potential to cause a physical change which would affect unique cultural values?

See item 20 a above.

_____ X _____

- d. Will the proposal restrict existing religious or sacred uses within the potential impact area?

See item 20 a above

_____ X _____

21. Marginal Cases/Opposition

- a. Is this an environmentally controversial project?

_____ _____ X

- b. Is there disagreement between experts over the significance of an effect?

_____ _____ X

- c. Is there opposition to this project?

_____ _____ X

See item a above

22. Mandatory Findings of Significance

- a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

_____ X _____

As concluded in the discussion of biological resources, with adoption of the proposed mitigation measures and compliance with City conditions, the continued development of the City at its planned growth rate will not cause the degradation or reduction of any sensitive terrestrial or aquatic habitat.

Yes Maybe No

- b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definite period of time while long-term impacts will endure well into the future.)

_____ X _____

- c. Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)

_____ X _____

Planned and regulated development in the City will not contribute to any significant cumulative impacts, and will have a beneficial impact on City housing supply.

- d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

_____ X _____

The mitigation measures presented in this Initial Study report will become required conditions of approval where applicable to new developments to insure that no direct or indirect adverse environmental effects will result from General Plan implementation.

IV. Discussion of Environmental Evaluation (Narrative description of environmental impacts)

Potential impacts related to slope stability, erosion, drainage, tree preservation, water quality, traffic, parking, municipal services, schools and population growths are identified in this initial study. All potential impacts identified in this study will have been mitigated through implementation of City policies in its General Plan and by the required environmental review process for new land development projects. The environmental review Initial Studies will contain mitigation measures expressed as conditions for approval. City of Red Bluff Conditions and Findings for this project are incorporated by references as part of this Initial Study.

In compliance with AB 3180, Mitigation Monitoring, all mitigations dealing with conditions for new development permit approvals will be monitored for a period of three years by a qualified environmental planner, costs to be paid by the development applicants.

V. **Determination** (To be completed by the Lead Agency)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

{ }

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet will be added to the project.* A NEGATIVE DECLARATION WILL BE PREPARED.

{X}

I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

{ }

6-1-93

Date

Charles E. Fayde
Signature

For City of Red Bluff

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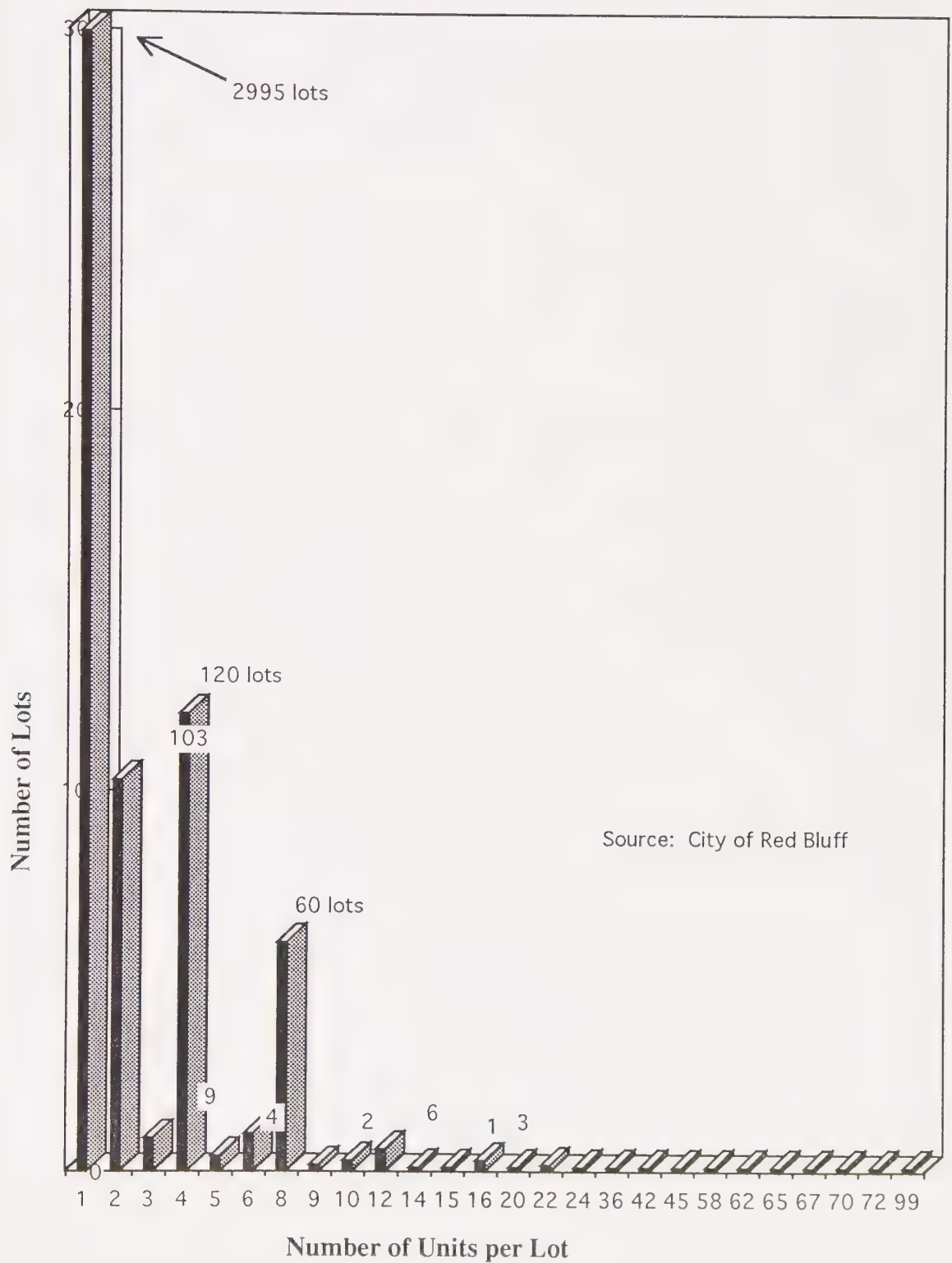
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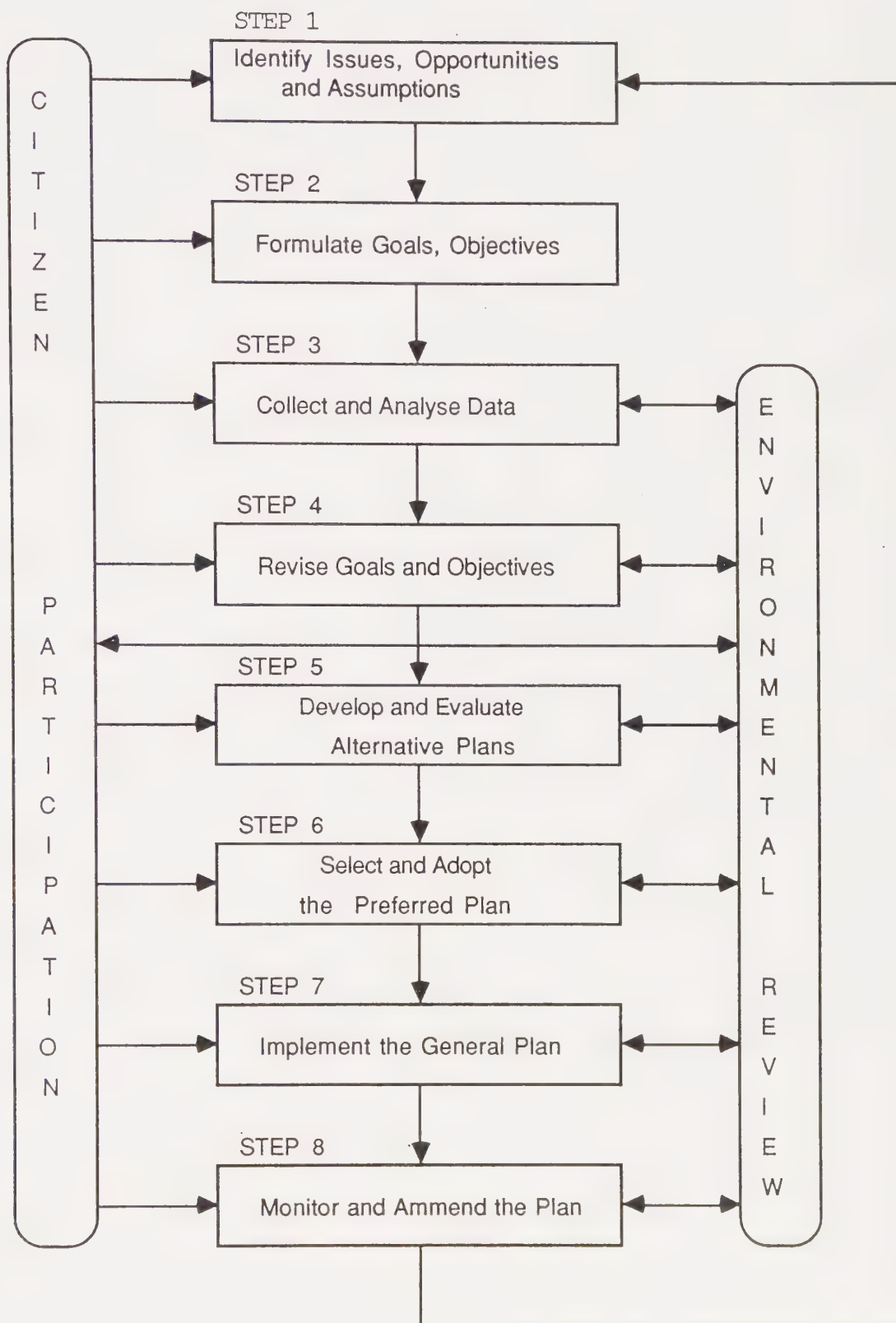
SUPPORTING DOCUMENTATION AND DATA

RESERVED

Figure 2

LOT HOUSING DENSITIES IN RED BLUFF





PLANNING PROCESS DIAGRAM

Source: State of California,
General Plan Guidelines

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RESOLUTION NO. 38-1993 (GPA-21)

GENERAL PLAN AMENDMENT NO. 21
ADOPT 1993 LAND USE AND NATURAL ENVIRONMENT ELEMENTS.

WHEREAS, Government Code beginning with Section 65300, specifies that Cities shall adopt and periodically update their General Plans; and

WHEREAS, the City of Red Bluff Planning Commission has conducted surveys and studies in connection with the updated Land Use and Natural Environment Elements of the General Plan of the City; and

WHEREAS, the Planning Commission did, after conducting public meetings and public hearings, recommend to the City Council the adoption of the updated Land Use and Natural Environment Elements, and approval of the related Mitigated Negative Declaration; and

WHEREAS, the City Council did hold public hearing on the updated General Plan Elements and the related Negative Declaration;

WHEREAS, the City Council did approve the related Negative Declaration on August 17, 1993 with the adoption of Resolution 25-1993;

NOW, THEREFORE BE IT RESOLVED that the City Council does hereby find that the updated General Plan Elements do conform to the provision of the Planning, Zoning and Development Law in the California Government Code Title 7 Division 1 beginning with Section 65000;

BE IT FURTHER RESOLVED that the City Council does hereby adopt the 1993 Land Use and Natural Environment Elements of the General Plan.

PASSED, APPROVED AND ADOPTED at a regular adjourned meeting of the City Council of the City of Red Bluff on November 16, 1993, by the following vote:

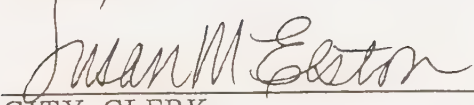
AYES: Councilmembers: Penne, Schoelen, Sale, Trujillo and Wintle.

NOES: None.

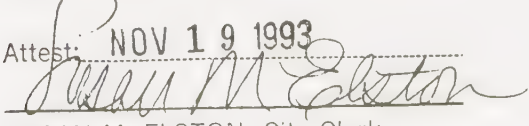
ABSENT OR NOT VOTING: None.


MAYOR

ATTEST:


CITY CLERK

This is to certify that the annexed document is a true and correct copy of the original on file in my office.

Attest: NOV 19 1993

SUSAN M. ELSTON, City Clerk
City of Red Bluff
County of Tehama, State of California

DRAFT
Natural Environment Element

Outline of Natural Environment Element

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NATURAL ENVIRONMENT ELEMENT

I. INTRODUCTION

A. General Description of the Element

The Natural Environment Element is a collaborative element that fulfills the statutory requirements of both the Conservation and Open Space Elements. The purpose and intent of this collaboration is to provide the reader with a more comprehensive and holistic view of the natural environment in the City of Red Bluff.

The Conservation and Open Space elements address issues that are either directly or indirectly related. This interrelationship fostered the need and ability for the element. Although there are no State guidelines for a Natural Environment Element, there are individual statutory guidelines for both the Conservation and Open Space elements. Those requirements were the basis for this element, and were carefully examined and addressed in order to secure the legal viability of this element.

B. Statutory Responsibilities/Requirements of the Element(s)

The Conservation and Open Space Elements are required to address certain mandatory issues. In general, the Natural Environment Element should address issues relating to; vegetation, wildlife, water resources, soil resources, atmospheric resources, mineral resources, and open space. The preservation, conservation and managed production of these resources is a fundamental part of the element.

A more detailed summary of the statutory responsibilities and requirements of Conservation and Open Space Elements is presented in Appendix A.

C. Internal Consistency

It is mandated by California State Law that, "...that the general plan and elements and parts thereof comprise an integrated, internally consistent and compatible statement of policies for the adopting agency." (Governor's Office of Planning and Research 1992, 24).

In order to comply with the internal consistency statute and to increase general effectiveness of the element all existing plan elements (Circulation, Housing and Land Use) were reviewed. Relevant goals, objectives, policies, and implementation measures provided by the three updated elements were incorporated into the Natural Environment Element and are indicated with underlining. The Noise and Safety Elements are currently being updated, and so they were unavailable for review and inclusion.

D. The Natural Environment Element as a Planning Tool

Once the Natural Environment Element is adopted by the City Council, it becomes law. In turn, all of the policies, programs and implementation measures cited in the element become legally enforceable. It is important that element be thoroughly reviewed before adoption so that it reflects the needs of the community once it becomes law.

In order to be effective, the guidelines set forth in this element must be implemented. It is the responsibility of local decision makers and the City staff to ensure that these guidelines are followed. Each section of this element is concluded with an executive summary, followed by a set of goals, objectives, policies, and implementation measures. These are the tools for implementation and are therefore the responsibility of the City.

The physical environment and needs of a community are constantly changing. This element should be dynamic to ensure it reflects theses changes and maintains its effectiveness as a planning tool. This can be accomplished through periodic review and revision.

A list of related case laws and other planning laws that may be used to enforce this element can be found in Appendix B.

NATURAL ENVIRONMENT ELEMENT

II. VEGETATION

A. Introduction

There are a three general vegetation types/habitats found naturally in the Red Bluff Planning Area. These include; riparian corridors, oak woodlands (which include upland areas with valley grasslands mixed with shrubs and scattered oaks), and wetlands.

B. Oak Woodlands and Valley Grasslands

The oaks in California are geographically distributed in fifty-two of the fifty-eight counties in the State, and comprise a latitudinal distance of more than eight degrees (Allen, 1990, pg 22). These habitats range from the low Mojave Desert slopes to the high western ridges of the Klamath Ranges (Griffin and Muick, 1990, 6). This variation in spatial distribution is reflective of the great diversity in oak woodland habitats.

There are sixty species of oaks (Quercus) that occur in the United States (Griffin an Muick, 1990, 4). There are nineteen species of Quercus that are endemic to the State of California. Of these; ten are tree oaks and nine are shrub oaks (Griffin and Muick, 1990, pg 4). There are also twenty-one hybrid species of Quercus that occur naturally in California.

The most prevalent species of oaks found in the Red Bluff Area is the blue oak (Quercus douglasii), live oak (Quercus wislizenii), valley oak (Quercus lobata), and canyon live oak (Quercus chrysolepis). Valley oaks and live oaks are often associated with riparian areas. In Red Bluff, species of blue oaks (woodlands) normally dominate the upland slopes adjacent to riparian areas.

In general, blue oak woodlands are dominated by blue oaks and are often interspersed with other oak species in valley areas. Soil type and slope determine the morphology of the woodland. The canopy is usually divided into two stories with the tallest containing oaks from 15 to 45 feet in height. Average girth ranges from 8 to 12 inches in diameter at four feet above the base (Department of Water Resources 1991, 39).

There are many definitions of oak woodlands, and for the purposes of this element the City should use the definition cited below. This definition was presented in the Department of Water Resources study entitled, Sacramento Valley Westside Tributary Watershed Erosion Study, Reed's Creek Watershed. The study was prepared in 1991 and is reflective of the oak woodlands located within the City. The definition is divided into three categories based on canopy cover, and they are as follows:

"Blue Oak Woodland (40 percent and greater tree cover) These areas are characterized by natural or nearly natural stands of blue oak. The trees are evenly distributed and undisturbed by harvesting activity.

Blue Oak Woodland (15 to 40 percent tree cover) These areas are predominantly mixed woodland and grassland. Tree stands are irregular and patchy; hill crowns are commonly bare of trees, and trees are most abundant on steep slopes and in gullies and ravines. Many places show evidence of selective cutting.

Blue Oak Woodland (0 to 15 percent tree cover) These areas are predominantly woodland converted to grassland with very sparse stands of blue oak remaining. Some natural savannahs are included." (Department of Water Resources 1991, 40).

Valley grassland in Red Bluff normally occur on the upland periphery of riparian areas and function as a transition zone between riparian and oak woodland habitats. These areas consist of annual and perennial grasses and forbs. Scattered individual species of oaks are also common in these grasslands (Department of Water Resources 1991).

There is a strong interrelationship between wildlife and oak woodland and grassland habitat. It has been estimated that there are currently 5,000 species of insects that utilize oak trees in California. Of these, approximately 1,000 are dependent upon the oaks for survival. There are fifty-eight species of lizard, snakes and amphibians that are associated with oak habitat. One hundred and five species of mammals depend on the oak woodlands as resource for their survival. Nearly all of the State's game species can be included in that number. Birds also utilize the habitat provided by the oak trees. In fact, it has been estimated that approximately 170 species of birds use these habitats at some point in their life span (Griffin and Muick, 1990 5).

The oak trees, both in stands and singly, provide many important functions in the environment. Beyond the provision of wildlife habitats, oaks; "...aid the cycling of nutrients, help prevent soil erosion, protect water quality on watersheds, purify the air we breathe, provide income from sale of hunting rights and wood products, enhance property values and attract tourist (Whittington, 1991, 20). These oaks are considered a valuable part of the State's heritage and yet only 48% of the planning agencies in the State have adopted tree protection ordinances (Whittington, 1992, 22).

The blue oak, valley oak and live oak are of special concern in California for several reasons. One of the major concerns is the difficulty they have in regeneration. Another reason is the continued loss of habitat due to grazing and cultivation (Department of Water Resources 1991).

C. Riparian Corridors

The City of Red Bluff is contained within the watershed of the Sacramento River. The Sacramento Basin covers an area of approximately 22,000 square miles and discharges an estimated 17,870,000 acre feet of water a year (from the lower Sacramento River) (Warner and Hendrix 1985, 3.8).

Riparian systems is a cumulative term that refers to the riparian areas and the associated plant and animal life. For the purposes of this element the definition provided by Warner and Hendrix, 1985 (Department of Fish and Game) will be used. The definition is as follows:

Riparian Systems "...are terrestrial sites where water, transported in from another place, accumulates sufficiently in the soil and other terrestrial substrates to potentially permit the growth of mesic (requiring medium to high soil moisture) terrestrial plants and associated animals...The riparian zone itself is bounded on the inner side by the aquatic zone with its saturated soils and hydrophytic plants, and on the outer side by the drier soils and xeric plants of the upland zone." (Warner and Hendrix 1985, 3.1).

It is estimated that there are currently between 600,000 and 1 million linear miles of riparian habitat in the State of California. This estimate was derived from the analysis of watercourse data from USGS 1:24,000 topographic maps (Warner and Hendrix 1985, 3.1). In general, the riparian zone extends from the watercourse to the 100 year floodplain (Warner and Hendrix, 1985, 3.1). There are several physical attributes which influence the type and extent of the riparian habitat.

The three major influences in the formation and structure of riparian habitat are; geomorphology, climate and hydrology and ecological interrelationships. The morphology of the land directly influences the characteristics of the riparian area by affecting the watercourse (and flow), erodibility, and associated vegetation. Location also influences which species will utilize the habitat area. Climate and hydrology affect the system by altering soil moisture, sunlight availability (photosynthesis capability hence biomass productivity), and the formation and perpetuation of microclimates within the system. The ecological interrelationships of riparian habitats can be very different from the surrounding (upland) areas. In fact, the species associated with these habitats do not always coincide with the natural distribution of flora within California (Warner and Hendrix 1985, 3.16-17). Riparian habitat areas (when undisturbed) provide a corridor for wildlife. An example of this is the important role riparian areas play in the migration of water fowl (e.g. the Pacific Flyway).

The extensive riparian areas in the City of Red Bluff naturally provide a lush and diverse habitat for many species of plants and animals. There are seven streams which run through the Red Bluff Planning Area; Red Bank Creek, Grasshopper Creek, Reed's Creek, Brickyard Creek, Brewery Creek, Dibble Creek, Blue Tent and their tributaries. All of these tributaries drain into the Sacramento River from the west. To the east; Paynes Creek Slough, Samson Slough and East Sand Slough offer areas of potential riparian habitat.

Riparian systems provide many environmental and social values. It has been stated that, "No ecosystem is more essential to the survival of the nation's fish and wildlife...(and that) western riparian ecosystems contain approximately 42 percent of the mammal species of North America, 38 percent of the reptiles, and 14 percent of the breeding birds..." (Warner and Hendrix 1985, 4.8). A list of these and other species potentially found in Red Bluff can be located in appendices D, E, F, G, and H. Additional values include; shading (for adjacent

watercourses), bank stability (erosion prevention), organic input (and biomass), habitat for aquatic insects, recreation, and scientific and economic values.

D. Wetlands

Wetlands are transitional habitats between an aquatic and terrestrial environment where the water table is at or near the ground surface or the ground is covered by shallow water (Stokes et al 1989, pg 22). There are many different definitions for wetlands. The definition provided in the Federal Manual for Identifying and Delineating Jurisdictional Wetlands will be utilized for the purposes of this element. This definition should also be used for future studies (and surveys) performed by the City unless an updated version or other definition is deemed more appropriate by the City.

This definition was chosen based on its merits as a Federally accepted definition. It is endorsed by four Federal Agencies, including; the United States Fish and Wildlife Service, the Environmental Protection Agency, the Department of Army (Army Corps of Engineers), and the Soil Conservation Service.

The definition is; "Those areas that re inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." (Wetland Training Institute 1989, 4). For more detailed guidelines refer to the Federal Manual for Identifying and Delineating Jurisdictional Wetlands.

The term wetlands encompasses a diverse collection of habitats which include; tidal flats, freshwater marshes, mangrove swamps, prairie potholes, peat bogs, cypress swamps, riparian wetlands, and vernal pools (Stokes 1989, 22 and Lollock et al, 1988, 25-31). The habitat type varies with geographic occurrence. Some of the factors which influence habitat type include; proximity to the ocean, type of climate, relation to inland water body, and soil type. Two types of wetlands occur within the Red Bluff Planning Area; riparian wetland and vernal pools.

The riparian wetland habitat is found in areas dominated by short (scrub/shrub) and tall (forested) hydrophytic vegetation, which have a minimum of 25% canopy cover (when foliage is present). These habitats are often associated with permanent and intermittent lakes, rivers and streams. Examples of typical plant species that dominate such habitats are; western sycamore, alder, willow, California bay, cottonwood, California blackberry, salmonberry, gooseberry, wax-myrtle, black walnut, box elder and twinberry (Lollock et al, 1988 pg 25).

The riparian wetlands provide habitat for an "...unusually high number of fish and wildlife species." (Lollock et al 1988, 25). Some species depend on the riparian wetland during different stages of their lives, while others may spend their entire lives within the habitat. Approximately 50% of the state and federally listed endangered and threatened fish, birds, amphibians, reptiles, and mammals rely on riparian wetlands.

Many species of birds depend on riparian wetlands for "...perching, roosting and nesting substrate..(and they also provide)..refuges and migratory corridors." (Lollock et al 1988, 25). Fish rely on riparian wetlands for "...cover..., spawning substrate, regulation of water temperatures, and preservation of water quality." (Lollock et al 1988, 25). In the summer, riparian wetlands provide terrestrial organisms with a cool environment, and a reliable, easily recognizable water source. In addition, riparian wetlands provide humans with a variety of recreational activities including, fishing, hunting, birdwatching, nature study, picnicking, and hiking.

Vernal pools are seasonal wetlands which are associated with the Mediterranean climate region of California (Lollock et al, 1988 31). There are only four other areas in the world that share this type of climate; Western Australia, the Southwestern corner of South Africa, Central Chile, and the Mediterranean Basin. The general characteristics of this climate are mild, wet winters and hot, dry summers. Vernal pools correspond to this climate by collecting water in the winter months and then shrinking and drying in the summer months.

Vernal pools not only require specific climatic conditions, but also require a certain combination of topography and soils. The topography is usually level plains dotted with small, shallow basins or depression. Below the surface there is normally an extensive impervious layer which permits the water to gather and remain for long periods of time. The weather and temperature will affect the duration of this inundation. The soils associated with this type of habitat are hydric and very fragile (Gustafson, S.S. 1990).

Vernal pools, like riparian wetlands, provide habitat for a number of both state and federally threatened and endangered species. Examples of these species include; "...frogs, toads, salamander,...aquatic insects,..and plants of plants." (Lollock et al 1988, 31). Vernal pools provide "...valuable outdoor classrooms for colleges and universities..." in which student can examine the morphology of the pools and the diverse populations associated with them. (Lollock et al 1988, 31). Migratory waterfowl such as; black-neck stilts, avocets, greater and lesser yellowlegs, egrets, herons, and smaller dabbling ducks utilize the resources provided by this type of habitat. Vernal pools provide such a delicate and rare balance of physical attributes, that entire orders of invertebrates are found only in these environments (Lollock et al 1988, 31).

Although these habitats provide valuable resources, they have and continue to be destroyed at an alarming rate. There have been many estimates as to statewide losses, however, it is generally accepted that there were originally 3-5 million acres of wetland habitat in the State. Today that number has been reduced to less than 500,000 acres. This figure, includes flooded agricultural lands which do not provide the abundant values for wildlife as available in naturally occurring wetlands (Lollock et al 1988, 21).

The destruction of wetlands in California has been the result of a variety of human induced activities. At present, the three main causes of habitat destruction in the State are; "...1) conversion of inland managed wetlands to

intensive agriculture and changes in crop practices; 2) urban, industrial, and port development on the coast of San Francisco Bay; and 3) channelization and ongoing maintenance of flood control channels." (Lollock et al 1988, 21).

Wetland habitat loss and degradation has placed immense pressure on the species of flora and fauna which depend on wetlands for food, shelter and breeding grounds. The tule elk was completely eliminated from areas due to such habitat loss and also due to overhunting (Lollock et al 1988, 21). There are approximately 24 animal species and several plant species that are listed as endangered, rare or threatened because of the loss of statewide wetland habitat. The remaining wetlands in the Central Valley provide wintering habitat for 60% of the waterfowl utilizing the Pacific Flyway (Lollock et al 1988, 21).

The overwhelming environmental, social and economic benefits associated with wetlands is the basis for giving them special consideration during the planning process. Their continual destruction and rapid extinction reinforces the need for protection.

E. Executive Summary

The existing native vegetation in the Red Bluff Planning Area provides environmentally and socially valuable resources for the community. These areas provide diverse and ecologically rich habitats for wildlife (including some endangered and threatened species), protect the soils from erosion, increase groundwater percolation, maintain water quality, and provide recreational and aesthetic resources for the public.

The majority of the City's natural vegetation occurs within and along stream corridors and adjacent upland areas. The exception to this, is the potential wetland (vernal pool) habitat areas located in the southwest section of the Planning Area, surrounding the Airport. Both the riparian corridors and wetland habitat areas are sensitive to development and are continually threatened by urban intrusion. It is vital to the maintenance of the current environment and standard of living that the City protect and preserve these areas. In order to achieve this, decisive regulation must begin today.

Currently, the Greenway and floodplain overlay zones (established in the Land Use Element) provide protection oak woodlands and riparian habitat areas. The goals, objectives, policies and implementation measures set forth below are intended to provide more extensive regulation and guidelines for these resources. In order for these guidelines to be effective, decision makers must consider and incorporate these into each land use decision. The consistency and accuracy with which these guidelines are implemented will directly reflect their effectiveness as planning tools.

GOALS

- Preserve the remaining oak woodlands and individual native species of trees in the Red Bluff Planning Area.

- Preserve and protect native grasslands in the Red Bluff Planning Area.
- Maintain and protect riparian corridors and associated vegetation and wildlife.
- Preserve and conserve wetland habitats.
- Conserve and improve groundwater, natural habitat, mineral, aesthetic, soil and air resources in the Red Bluff Planning Area (Land Use Element).

OBJECTIVES

- Protect and prevent human disruption in all areas designated as Greenways by the Land Use Element.
- Protect and prevent human disruption in all areas designated as Floodplains by the Land Use Element.
- Achieve and maintain a standard of no net loss of native tree species.
- Protect all riparian habitat areas located within the City of Red Bluff, and work with the county to provide protection for those areas located within the Planning Area.
- Conduct an inventory of all wetland resources in the Red Bluff Planning Area.

POLICIES

- Provide for the protection of native tree species by incorporating specific standards into all planning related decisions.
- Require an on site botanical survey, in addition to any CEQA mandated surveys, for all projects located in or near riparian areas, oak woodlands, and all areas where other endangered plant species have been identified.
- Require that all projects located in areas of potential wetland habitats prepare an on site survey, utilizing the City accepted guidelines for wetland delineation.
- Discourage digging trenches (for utilities, etc.) within the root protection zone (RPZ), and if unavoidable, require that all digging be done by hand.
- Discourage further development on prime agricultural soils and within riparian habitat, woodland, scenic areas and designated wetlands to preserve urban area environmental resources (Land Use Element).
- Discourage development that does not incorporate native physical land features into the project design (Land Use Element).
- Encourage planting, preservation and replacement of native trees (Land Use Element).

IMPLEMENTATION MEASURES

- Utilize the information provided in the wetland inventory (as designated by the objective above) in all land use decisions.
- Prepare and adopt a tree preservation ordinance that is focused on woodland habitat and individual native tree protection, as designated by the Land Use Element.
- Make the policies of the adopted tree ordinance available to the County Planning Department and encourage their compliance in areas surrounding the planning area periphery.
- Require all new developments to achieve a status of no net loss of native tree species. This may be accomplished through site design, replanting, or any other method that the City deems acceptable.
- Provide developers with a copy of How to Save Trees During Construction, Living with Urban Soils, and or The Right Tree for the Right Place or any set of guidelines which staff deems appropriate.
- Provide a list of compatible native plants for under and around oaks to those applicants developing in areas where oaks are present, and encourage the use of these plants in order to maintain oak and soil viability.
- Incorporate all findings and required surveys relating to endangered plant species and wetland habitats into the corresponding land use decisions.
- Restrict all development in riparian habitat areas.
- Enforce any of the 123 conditions and findings which relate to vegetation preservation, conservation and or maintenance as presented by the City of Red Bluff.
- Direct residential development, under careful site and project design to areas south of Kimball Road, west of the City outside creek floodways and riparian habitat and to the north, west of the freeway (Land Use Element).
- Implement Grading, Drainage and Ground Cover Policies Section IV A to minimize disturbance of riparian and other existing vegetation and Section V regarding vegetation preservation, replacement and new species introduction (Land Use Element).
- Implement Land Development Policies Sections II B 3,5 regarding tree cover and endangered species, III B regarding natural tree cover, and III C regarding development within greenways and floodplains (Land Use Element).

NATURAL ENVIRONMENT ELEMENT

III. WILDLIFE

A. Introduction

The Red Bluff Planning Area includes extensive tracts of urbanized land, which have replaced much of the natural habitat that once existed. The majority of wildlife found within the Planning Area occurs in the waterways that bisect the area and in the three vegetation types discussed in the prior section; oak woodlands and grasslands, riparian corridors (and greenways), and wetlands. These diverse habitats provide areas for breeding, nesting, feeding and shelter to a multitude of species. The following section briefly discusses the species of wildlife that are commonly associated with the habitat types found in Red Bluff.

B. Red Bluff

1) Birds

Riparian and wetland habitats provide important feeding grounds for migratory species of birds. These areas offer food, protection from the sun and predators, water and breeding grounds. Species that can be found in these areas are; the great blue heron, brown-headed cowbird, osprey, black-shouldered kite and several species of swallows. The Sacramento River is also a foraging area for the bald eagle, a Federally listed endangered species (USDA Forest Service 1990, 111-4).

Oak woodlands and associated savannah areas provide foraging habitats for bird of prey species, including hawks and kites. Several species of ground nesting birds also utilize this habitat type. Examples of these birds include; the white-crowned sparrow western meadowlark, and ring-necked pheasant. For a comprehensive list of potential species of birds in the Red Bluff Planning Area see Appendix C.

The Tehama County General Plan recognizes two species of birds whose habitat areas are included in the North I-5 planning area, which encompasses the City of Red Bluff. Although the habitat area may not be contained within the Red Bluff Planning Area, the information may still prove useful. The two species of birds are; the Wild Turkey and the Sandhill Crane. The maps delineating their habitat areas are available at the Tehama County Planning Department.

2) Fish

The Sacramento River flows through the Planning Area from the north to the south. The river itself provides an important habitat and breeding area for several species of fish. These species include; the federally listed endangered species of chinook salmon, steelhead trout, striped bass, king salmon, American shad, and white sturgeon (Department of Water Resources 1984, 7 and Tehama County Planning Department 1983, 111-44).

The westside tributaries and eastside sloughs of the Sacramento River also provide important habitat areas for different species of fish. The

majority of the fish that utilize these waters however, are non game species such as suckers. The headwaters of the larger tributaries may be periodically used game fish (salmon, trout, etc). For a more comprehensive list of fish species found in the Sacramento River and its tributaries see Appendix D.

3) Insects

There are a variety of insects associated with each of the major habitat types found in the Red Bluff Planning Area. The aquatic insects of the riparian systems play an important role in the food chain (Warner and Hendrix 1991, 4.26). The most notable insect in Red Bluff however, is the valley elderberry longhorn beetle.

The valley elderberry longhorn beetle (Desmocerus californicus dimorphus) is currently listed as a Federally threatened species. The California Department of Fish and Game's Natural Diversity Data Base identified a community of beetles along the Sacramento River where it bisects Interstate 5. This location is discussed at further length in the Endangered Species Section of the element.

4) Mammals

Species of deer, beaver, mice, squirrels and bats are often associated with the riparian and wetland habitat areas in Red Bluff (USDA Forest Service 1990 and Warner and Hendrix 1991). A comprehensive list of potential species of mammals found in Red Bluff is located in Appendix E.

5) Reptiles

There are approximately twenty species of reptiles associated with the riparian habitat found along the Sacramento River. The westside tributaries of the Sacramento River (specifically; Blue Tent Creek, Dibble Creek, Brewery Creek, Brickyard Creek, Reed's Creek and Red Bank Creek) provide some type of habitat for over thirty species of reptiles. See Appendix F for a species list.

6) Amphibians

The riparian habitat areas in Red Bluff provide optimal conditions for a variety of amphibian species. These species utilize riparian habitats for different phases of their lives, some even spend their entire life cycle within the habitat. A species candidate list for amphibians that may be found within the Red Bluff Planning Area may be found in Appendix G.

C. Executive Summary

The City of Red constitutes over 7.5 square miles of land. The majority of this land is urbanized or will be in the future. The existing wildlife in Red Bluff is dependent on remaining areas of natural habitat. The proper administration of the goals, objectives, policies and implementation measures of

this section and the Vegetation section are imperative to the maintenance of these populations.

It is the responsibility of the City to ensure that the guidelines of this element are enforced and that the existing wildlife is protected.

GOALS

- Protect remaining populations of native wildlife in the Red Bluff Planning Area.
- Preserve existing wildlife habitat areas, including; oak woodlands, valley grasslands, riparian areas, and wetlands.
- Conserve and improve groundwater, natural habitat, mineral, aesthetic, soil and air resources in the Red Bluff Planning Area (Land Use Element).

OBJECTIVES

- Prevent the extinction of wildlife species in the Red Bluff Planning area.
- Maintain, improve and where possible increase habitat areas in the Red Bluff Planning Area.
- Encourage the preparation of a local species list, which incorporates location, status, and extent of occurrence.

POLICIES

- Encourage projects that minimize the impact on habitat areas.
- Encourage the sharing of information regarding wildlife between the public and private developers.
- Promote infill and cluster developments in existing urban areas, and direct growth out of habitat areas.
- Promote infill development through incentives to manage community land use balance and increase efficiency of service delivery (Land Use Element).
- Encourage urban creek restoration (Land Use Element).
- Discourage further development on prime agricultural soils and within riparian habitat, woodland, scenic areas and designated wetlands to preserve urban area environmental resources (Land Use Element).

IMPLEMENTATION MEASURES

- Require a wildlife survey for all projects located in a potential habitat area and require that the findings of the survey be incorporated into the decision making process.
- Restrict development in areas where special (endangered or threatened) species of animals have been located.
- Provide development incentives for projects which incorporate habitat protection into project design.

NATURAL ENVIRONMENT ELEMENT

IV. ENDANGERED SPECIES

A. Introduction

The purpose of this section is to address the location and type of special species of plants, mammals, fish, birds and insects in the Red Bluff Planning Area. The existence of these species is already threatened and it is therefore imperative that they be addressed during the planning process.

B. Natural Diversity Data Base

In 1989 the California Department of Fish and Game converted the Natural Diversity Data Base to a Geographic Information System (GIS). The computing platform is made up of Hewlett-Packard computers and HP-UX (UNIX) operating system. The software is Genamap, which is a vector-based GIS. The Genamap software handles the graphic and geographic functions. The textual information is handled by Oracle, a relational data base manager (Department of Fish and Game 1992).

The NDDDB provides information concerning special plants, animals and natural communities throughout the State. The cartographic base is modeled after the USGS 1:24,000 topographic quadrangles. The City of Red Bluff Planning Area is covered in two quadrangles; Red Bluff East and Red Bluff West. The maps are mylar overlays and they are accompanied by descriptive text. The maps and text are property of the City and may be found at the Planning Department.

There were a total of seven species identified on the two overlays. Three of these species occurred in the Planning Area, and two were just outside the periphery. The description, including location for these five occurrences is presented below.

C. Natural Diversity Data Base Listings

The following descriptions are taken from information provided by the Department of Fish and Game's NDDDB. These listing were current as of May 6, 1992.

Northern Hardpan Vernal Pool is one of the occurrences located just outside the Planning Area. It is currently not rated on either a Federal or State level. It is located on the Red Bluff West USGS quad, immediately southwest of Bidwell Airport, along Paskenta Road. There is approximately 160+ acres of the habitat. A field survey prepared by T. Griggs in 1980 can provide additional information.

Riparia riparia (Bank Swallow) is the other occurrence located just outside of the Planning Area periphery. The location is approximately one mile south of the Red Bluff Diversion Dam, on the left bank of the Sacramento River. Bank swallows are normally associated with riparian forests. Currently this species is on the California threatened list.

Cryptantha crinita (Silky Cryptantha)-is rated Category 2 under Federal listings. Category indicates that the species is currently under consideration for a Federal listing. The plants were located on the southern bank of Dibble Creek, approximately 400 feet southeast of the northbound I-5 bridge. The species was found on cobble banks, gravel and sandy bars.

Juncus leiospermus Var leiospermus (Red Bluff Dwarf Rush) was located approximately two miles south of Red Bluff near the Diversion Dam. Approximately 35% of the identified area fell within the Planning Area boundaries. The species is listed as under Federal Category 3C, which indicates that the species has been withdrawn from candidacy. The plant was found "...in low places in grain field, treeless plain and red clay soil."

Desmocerus Californicus Dimorphus (Valley Elderberry Longhorn Beetle) was located on the right bank of the Sacramento River at mile 246.2, along I-5 in the City. The beetle was found in a riparian habitat that had an elderberry understory and was overgrown by grape and blackberry. The species is currently listed as Federally Threatened.

D. Executive Summary

The data cited above provides valuable information as to the location and type of sensitive species located within the Red Bluff Planning Area. This information should be made available to the Planning Commission, City Council, Planning Staff and the general public. Even the occurrences located outside of the planning area could prove to be useful, as indicators for potential occurrences in similar habitat areas within the planning area. It is therefore considered advantageous for the City to utilize all information provided by the Natural Diversity Data Base, and give it special consideration during the decision making process.

In order to maintain a viable natural community in Red Bluff, it is important to consider all facets of its environment, regardless of size. Balance is the key to maintaining this type of community and it can be done in a variety of ways.

One of the most important facets in maintaining a balanced environment is first the recognition and understanding of its components. Special consideration should be given to those natural elements which are already threatened. One major source of information is the Department of Fish and Game's Natural Diversity Data Base. Copies of the overlay maps, base maps, and text are all available for City use at the Planning Department. It is a policy of the Department of Fish and Game that this information may not be copied and or used for private purposes.

A second way to acquire more detailed information is to require, and or encourage the preparation of site surveys on a project by project basis. This type of review will include any project which requires discretionary review by the City, including; all new developments, subdivision maps, and conditional use permits. This will allow the decision makers, the public, and or developers to better understand an area before irreversible alterations begin.

The cost of these site surveys could be left to the applicant (of the project), therefore eliminating the burden for the City. In exchange, the applicant would be provided with valuable information prior to the design of phase of his/her project. Prior knowledge of this type could save the applicant considerable money, while providing valuable information to the City. This information could also be made available to the public for educational purposes.

GOALS

- Provide a balanced environment in which all species are allocated habitat areas free from human disturbance.
- Protect and preserve viable populations of all special (endangered, threatened or sensitive) species of plants and animals in the Red Bluff Planning Area.

OBJECTIVES

- Protect and maintain ecologically rich habitat areas in order to prevent human induced eradication of endemic wildlife species.
- Conserve and protect habitat areas associated with special species of plants and animals.

POLICIES

- Restrict all development in areas where endangered and or threatened species have been identified by the Natural Diversity Data Base and other sources.
- Encourage biotic and botanical surveys for all projects, including those that are exempt (categorically and otherwise) from the CEQA process.
- Restrict any development or disruption that would alter the habitat where specific rare and or threatened species of wildlife and natural communities have been identified.
- Maintain and utilize current copies of the Natural Diversity Data Base.
- Encourage projects which take the natural environment into consideration by modifying site design as a means buffer sensitive areas.

IMPLEMENTATION MEASURES

- Require an extensive survey and study of areas located near the periphery of known occurrences of rare and or threatened species of wildlife and natural communities, and use those findings during the decision making process.

- Require that all information regarding new occurrences be transmitted to the Department of Fish and Game, Natural Heritage Division (see Agency Reference List in appendices for contact person and phone number).

NATURAL ENVIRONMENT ELEMENT

V. WATER RESOURCES

A. Introduction

This section of the Natural Environment Element discusses issues relating to the City's water supply and water quality. Issues relating to the watershed and riparian resources are addressed at further length in other sections of the element (Vegetation and Wildlife).

During the regular session of the State Legislature in 1983-84, Assembly Bill 797 was passed. This bill resulted in California Water Code Section 10610 et. seq. and required all "...all urban water purveyors with more than 3,000 service connections to prepare, adopt, and submit a water management plan to the State Department of Water Resources no later than December 31, 1985." (City of Red Bluff Public Works Department 1985, 1). At that time, the City of Red Bluff had an estimated population of 11,100 and was servicing 3,500 water connections. It was therefore required that the City prepare a management plan. This plan was updated in 1990 and then amended again in January of 1992.

It is required by State Law that the conservation element of the general plan be consistent with any pre-existing water management plan. It is therefore imperative that the existing plan be addressed here. The following information is presented in the City's Water Management Plan (and consequent updates), Annual Water Quality Reports (1989-1991), 1991 Annual Report to the Office of Drinking Water, and the 1991 Management Plan prepared by Bryan Murphy and Associates).

B. History

The City of Red Bluff owns and operates the municipal water supply and distribution system. The system was purchased from a local private company in 1921 (City of Red Bluff Public Works Department 1990). During the early 1920's there were approximately 3,100 people in need of water services. Today there are 12,568 people and approximately 3,700 water service connections (City of Red Bluff Public Works Department 1991 (1991 Annual Report to the Office of Drinking Water) and Bryan Murphy and Associates 1991).

The major source before the 1921 sale of the service system was the Sacramento River. This source was abandoned in 1921, and Antelope Creek was added at a later year. The Antelope Creek source was abandoned in the 1963. Presently, all municipal drinking water is taken from ground wells (City of Red Bluff Public Works Department 1990).

C. Water Supply and Consumption

The City of Red Bluff's water distribution system is completely self supplied, therefore not requiring the purchase of water from outside sources. All of the groundwater comes from the Sacramento Valley Groundwater Basin

(SVGB). The SVGB supplies groundwater for the majority of Tehama County, and the county supplies approximately 21% of the recharge for the basin. Red Bank and Reed' Creek play an important role in this recharge (Tehama County Planning Department 1983, 111-28).

The water supplied to the residents of Red Bluff comes from a reservoir and twelve ground water wells. The ground water table is considered to be abundant with levels from 30 to 60 feet below surface elevation. The water table has remained relatively stable, even in the years of drought and it is not anticipated that there will be a water shortage in the near future (through 2000). The depth of the aquifer occasionally fluctuates resulting in increased energy consumption for the electric well pump motors (City of Red Bluff Public Works Department 1990).

The average annual rainfall in the City of Red Bluff is 22 inches. The majority of this precipitation comes during the period from November through April. Summers are hot and dry, and winters are moderately cold. During the summer months of July and August, temperatures in excess of 100°F are common. It is during these summer months that the highest water usage and demand occurs (City of Red Bluff Public Works Department 1990).

In 1991, the system produced a total of 1,498.7 million gallons of water, and served a population of 12,568. The month of maximum water use was June, in which 200.5 million gallons of water were consumed (Red Bluff Water Department 1992).

The largest consumer group was the "general and residential", consuming a total of 900 million gallons. The second largest user was the commercial sector with a total of 596 million gallons. The industrial sector utilized the least amount with a total of 3 million gallons for the year.

There were five improvements made to the system in 1991. These improvements include: the completion of a computerized system for improved management and design; alteration (lowered bowls 40 feet) of well No.8; the addition of three dedicated sampling stations; the replacement of 2,100 feet of deteriorated and undersized mains; and the closing of the loop near Walnut and Bayless Street.

D. Water Quality

The City of Red Bluff has an excellent source of ground water which has consistently maintained a high level of purity. Each year the City prepares an annual water report that contains information regarding water source and quality. These reports were mandated by the State of California and began in 1989. Each year a copy of this report is distributed to every consumer.

The State has Maximum Contaminant Levels for mineral and chemicals in drinking water. The State Department of Health Services establishes these standards for drinking water based on the National Interim Primary Drinking Water Regulations (promulgated by the Environmental Protection Agency) (City of Red Bluff Water Department 1990, pg 3-1898 annual report).

The Maximum Containment Levels and the corresponding levels detected in the Red Bluff wells are presented in each annual report. The parameters of the report include; Clarity, Microbiological, Organic Chemicals, Inorganic Chemicals, Radioactivity, and Additional Constituents. All sources, with the exception of Bacteriological and Radiological, are tested every three years at a private laboratory (City of Red Bluff 1990).

Bacteriological sources require testing four times a week and the results of these tests are reported to the State Department of Health Services on a monthly basis. These tests are performed by the City, in a City laboratory. Radiological tests are performed every four years at a private laboratory. Pesticides are also tested, but only on an as requested basis (City of Red Bluff 1990, 1991, and 1992).

In the years following the initial 1989 annual report, water quality levels have remained constantly high. See Appendix H for the most recent (1991) water quality statistics.

There were a total of 42 written or verbal complaints made by customers in 1991. Twenty four of these were regarding leaks, all of which were repaired. The remaining 18 complaints were regarding physical problems, such as pressure, and were all investigated. There were no complaints regarding water quality (City of Red Bluff Public Works Department, 1991).

E. Wastewater, Sewage and Hazardous Waste Disposal

The present wastewater and sewage collection system comprises approximately 36 miles of sanitary sewer pipeline, six major trunk sewers, ten pumping stations and one sewage treatment (or water recycling) facility. The majority of the 36 miles of piping are located within the public-right-of-way (Bryan Murphy Associates 1991).

The sewage treatment plant, otherwise known as the water recycling facility is located along the Sacramento River (just south of where East Sand Slough joins the Sacramento River) on Messer Road. The average annual flow of discharge through this facility is over 1.15 millions gallons per day and it has a capacity of 2.0 million gallons per day. After the wastewater reaches the plant, it goes through a four part reclamation process.

The reclamation process includes; screening and grit removal, secondary treatment, disinfection and solid stabilization. The liquid portion of the final product is discharged into the Sacramento River. This effluent is high in quality, and often contains a lower amount of suspended solids than the water in the Sacramento River (Bryan Murphy Associates 1991). For more detailed information, maps and logistics of the wastewater and sewage disposal system, please refer to the City of Red Bluff 1991 Master Plan (Infrastructure Capital Improvement Program) prepared by Bryan Murphy Associates.

Hazardous waste disposal is managed by the county, as dictated by the Tehama County Hazardous Waste Management Plan (Volumes I and II). The hazardous waste generated by institutions, businesses and public agencies are removed from the site of generation and taken to an off site facility where they

will be stored, disposed of or recycled. The majority of waste shipped off site in 1985/1986 was; empty containers (42.5%), followed by PCB's and Dioxins (32.95%) and Organic Liquids (26.82%) (Vence et al 1989, 2-14,15,16).

It is estimated that individual households in Tehama County (including the City of Red Bluff) produced 124 tons of hazardous waste in 1986. The top three waste groups were; waste oil (35%), dye and paint sludges/resins (24%) and other inorganic solid wastes (16%) (Vence et al 1989, 2-29). Many of these wastes are disposed of or stored improperly and eventually result in the contamination of the natural environment.

One way to mitigate improper household waste disposal is to develop and administer a plan for its disposal. Another possible way is through education. Educating the public as to what common household products are hazardous to the environment and how to dispose of those products could help decrease the rate of contamination. This issue is addressed in the Goals, Objectives, Policies, and Implementation Measures of this section.

The Tehama County Hazardous Waste Management Plan identifies six contaminated sites in Tehama County. Three of the contaminated sites are located within the Planning Area, and one is located just outside of the southern boundary of the Planning Area. All four sites have been investigated and are either undergoing remedial action or have completed it. The four contaminated sites and a brief description of each are presented below.

In 1981 it was reported that the Diamond Lands Lumber Products, located on Diamond Avenue in Red Bluff, had two potential contamination sites. In 1985, it was discovered that the Plywood Division had been discharging phenolic resin into Reed's Creek and the Lumber and Fiber Division had been discharging recycled water containing wood wastes into the Sacramento River. The sites were investigated by the Regional Water Quality Control Board (RWQCB) and remedial actions were requested. By 1987, both the RWQCB and the Environmental Protection Agency (EPA) determined that, "...no further action was necessary." (Vence et al, 1989, 2-34,35).

In July of 1986 the Pacific Gas and Electric gas plant located on the corner of Oak and Rio streets was discovered. No contaminants have been identified as of yet and the Department of Health Services has, "... placed the site in the backlog site cleanup report portion of the Bond Expenditure Plan." (Vence et al 1989, 2-36). This plan is reviewed annually and it dictates specific remedial action plans for each site. The Sobek Ranch site in Paskenta is also listed in the Bond Expenditure Plan for Tehama County. For more information regarding the plan, please see the Tehama County Hazardous Waste Management Plan section 2.2.7.

The Louisiana Pacific Corporation site is located just south of the Planning Area (south of Red Bank Creek) on Reading Road and was discovered in 1985. This site violated several codes and contamination included; wastewater discharge, soil contamination, and unregistered underground tanks (including improper closure and or abandonment). Currently, all tanks

are registered, and the corporation is taking measures to rectify all violations (Vence et al 1989, 2-36).

Leaking underground storage tanks (for fuel, pesticides, herbicides, etc.) are another potential hazard that could influence water quality in Red Bluff. It has been estimated that one out of every ten tanks (or 10%) will undergo either a structural failure or leak of some sort. There were 318 tanks registered in the county as of 1987. This number does not include certain tanks which have a capacity of less than 1,100 gallons (Vence et al, 1989 appendix M and 2-37).

There are two basic pieces of legislation which monitor and govern underground storage tanks; California Administrative Code (Title 23, Subchapter 16) and California Health and Safety Code, (Division 20, Chapter 6.7). The Regional Water Quality Control Board, Department of Health Services, California Department of Fish and Game, Division of Environmental Health, Red Bluff Fire Department may also become involved in cases of contamination (Vence et al 1989, 2-37).

The potential for contamination through tank leakage (10% of all tanks) is substantial enough to warrant special consideration in this section of the Natural Environment Element. This consideration is reflected in the Goals, Objectives, Policies and Implementation Measures of this section.

G. Conservation Techniques

The most aggressive conservation currently employed by the City is the conversion from a flat rate system to a metered one. This action was initiated by Ordinance 580 (Section 24.281), and will eventually result in a more effective way to monitor water consumption. In addition to increased efficiency, it allows the City to impose a new rate structure based on consumption, which will add a fiscal incentive for conservation.

According to the 1991 Annual Report to the Office of Drinking Water there are currently 3,711 active connections in the system. As of the year end 1991, 2,158 of those connections were on the metered system and the remaining 1,553 still remain on the flat rate system (City of Red Bluff Public Works Department 1992-see above). This process of conversion is expected to be complete within the next ten years (City of Red Bluff Public Works Department 1990).

According to the 1990 Update to the Water Management Plan there are twelve ordinances that address water conservation. The specific issues range from; prevention of waste to recirculating of air conditioner water. The most predominate issue, however, is the above stated conversion of a flat rate to a metered system.

Resolution No. 12-1992 concluded that it is not appropriate at this time for the City of Red Bluff to "...implement the State of California model water efficient landscape ordinance." (City of Red Bluff 1992 (Res. No. 12-1992). Reclaimed water, however, is currently being used as a conservation method by the City. The sewage treatment plant utilizes reclaimed water for landscaping/irrigation purposes. Cal Trans is also utilizing reclaimed for the

landscaping along Highway 5 (City of Red Bluff Public Works Department 1990).

H. Executive Summary

The City of Red Bluff has an excellent source of ground water. The future maintenance of ground and surface water quality depends on many factors, including; the prevention and or mitigation of hazardous waste contamination (of both soil and water resources), watershed protection, prevention of soil erosion, and preservation of recharge areas (through open space).

GOALS

- Promote a continued supply of high quality ground and surface water in the City of Red Bluff.
- Conserve and improve **groundwater**, natural habitat, mineral, aesthetic, soil and air resources in the Red Bluff Planning Area (Land Use Element).
- Manage the treatment, reuse, removal and disposal of all solid waste generated within the City of Red Bluff (Land Use Element).

OBJECTIVES

- Maintain and protect watershed and recharge areas (including areas important to percolation such as Red Bank and Reed's Creek).
- Preserve and maintain the natural state (including soils and vegetation) in areas where recharge and percolation occur.
- Minimize water waste and runoff in the Red Bluff Planning Area.
- Reduce the amount of sediments entering the waterways in the Red Bluff Planning Area.
- Minimize and mitigate environmental contamination generated by hazardous wastes.

POLICIES

- Encourage all existing and new development (residential, commercial and industrial) to incorporate water conservation methods into plan design so that water waste, use and runoff can be minimized.
- Ensure the continued high quality of groundwater by encouraging projects which minimize soil erosion.

- Restrict and limit, wherever possible, the alteration of natural drainageways and associated vegetation.
- Restrict urban intrusion into floodplains and associated Greenway zones.
- Reduce and minimize the use of paving in recharge areas, both on private lands and in public lands (including rights of way and utility easements).
- Encourage the continued use and development of programs which utilize reclaimed water.
- Educate the public on issues of hazardous waste generation, storage and disposal.
- Limit, and wherever possible disallow the intrusion of industrial and agricultural pollutants into the groundwater table.
- Encourage urban creek restoration (Land Use Element).
- All new residential subdivisions, commercial or industrial land development within the City Planning Area should be contingent upon water and sewer services including sewer, water and emergency vehicle access (Land Use Element).
- Require industry participation in waste treatment and recycling efforts (Land Use Element).

IMPLEMENTATION MEASURES

- Enforce all of the guidelines provided by the Grading, Drainage and Ground Cover Policies and the Land Development Policies.
- Prepare, adopt and implement a household hazardous waste management plan.
- Provide all water customers with a list of common household products which are considered hazardous by the Department of Health Services (see Appendix I).
- Provide all water customers with information regarding the current methods available for disposal and or storage of hazardous waste (Appendix J).
- Require new projects, both private and public, to consider the use of drought-tolerant native vegetation for landscaping purposes.
- Direct residential development, under careful site and project design to areas south of Kimball Road, West of the City outside creek floodways and riparian habitat and to the North, West of the Freeway (Land Use Element).

- Fill materials should not encroach upon floodways, drainageways, protected trees, adjacent lots or properties nor should they create unstable or erodible surfaces (Land Use Element).

NATURAL ENVIRONMENT ELEMENT

VI. GEOLOGY AND SOILS

This section of the Natural Environment Element addresses the general geology and soil types found within the City of Red Bluff Planning Area. Included in soil types are the Department of Conservation's Important Farmland Map Series classifications. Soil erosion is also addressed, as it was determined to be an issue of concern for the City during the scoping phase of this project.

A. Geology

The City of Red Bluff is located within the Great Valley Geomorphic province. The province includes that area known as the Great Central Valley of California and extends 400 miles north to south and 60 miles east to west (Department of Water Resources, 1991, 11). It is encompassed by the Coast Ranges (metamorphic), the Klamath Ranges (metamorphic), the Cascade Range (volcanic) and the Sierra Nevada (granitic and metamorphic).

The majority of rocks and deposits found within the province are sedimentary. The age of these rocks and deposits range from Upper Jurassic to Recent (Department of Water Resources 1991, 11).

The Tehama Formation is a Plio-Pleistocene occurrence that is composed of fluvial sedimentary deposits of "...semi-consolidated pale-green, gray and tan sand, tuffaceous sand, silt, and clay. The formation has scattered, discontinuous lenses of gravel." (Department of Water Resources 1991, pg 13). This semi-consolidated material ranges in depth from 5-40 feet within the formation. The general appearance of the formation is fine-grained (Department of Water Resources 1991, 14.)

The Red Bluff Formation is a Pleistocene occurrence that is composed of coarse gravel and clayey matrix that is brick-red in color. The depth of the formation varies within the unit, with some of the thickest deposits being found in the City of Red Bluff. Here the deposits can be as thick as 30 feet in depth. There are significant erosional remnants of the formation found within the City (Department of Water Resources 1991, 14).

The California Division of Mines and Geology prepared a geologic map which includes the City of Red Bluff in 1962 (most recent reprint completed in 1977). The map is entitled the Redding Sheet and it has a scale of 1:250,000. Although the scale is too small for general planning practices, it provides adequate depth for this purpose. A copy of the map available at the Red Bluff Community Development Department or at the California Division of Mines and Geology (1416 Ninth Street, Room 1341, Sacramento).

B. Soils

There are six major factors that influence and control the characteristics of the soil for any given area, and they are; climate, relief/topography, organic

content, parent material, time, and human activity (Department of Water Resources 1991, 21 and Soil Conservation Advisory Committee 1987, 3).

Most soils have several layers. In areas where there has not been significant disturbance, there are usually three main layers. These layers are commonly referred to as; the surface, topsoil or solum, the subsoil, and the underlying or parent material (Soil Conservation Service 1990, 10). The soil profile refers to the all layers of the soil, from the surface down to the parent material. The characteristics of each layer vary with depth and type.

The following information has been provided by various government agencies and it would be advantageous for the City to consider this information when making land use decisions. The Soil Conservation Service, under the United State Department of Agriculture, prepared a Soil Survey, Tehama County California in May of 1967. This report provides general soil maps (orthophotos) and accompanying text for the entire county. The City of Red Bluff Planning Area is included in four of these maps; sheets 67, 68, 74, and 78.

It has been estimated that there are over 1300 different soil types in the state of California (Soil Conservation Advisory Committee 1987, 3). After examination of the soil maps provided by the Soil Conservation Service, it was determined that there are 37 different soil types within the Red Bluff Planning Area. These soil types, along with their map symbol, acres (county total), and slope percent are identified in Appendix K. A brief discussion of each soil type can be found in the Appendix L. These descriptions were adapted directly from the Soil Conservation Service survey.

Of the 37 soil types identified in the Planning Area, 15 general soil series are represented. These series include; the Arbuckle Series, the Clear Lake Series, the Columbia Series, the Corning Series, the Cortina Series, the Hillgate Series, the Maywood Series, the Nacimiento Series, the Newville Series, the Perkins Series, the Red Bluff Series the Redding Series, Riverwash, the Tehama Series, and the Zamora Series.

C. Agricultural Lands

1) Important Farmland Mapping Series

The California Department of Conservation offers a series of maps entitled the Important Farmland Maps. These maps are part of a statewide Farmland Mapping and Monitoring Program. The purpose of the program is, "...to monitor conversion of the state's agricultural land to and from agricultural use, and to report that conversion annually to the Legislature, local government, and the public." (California Department of Conservation 1984, opening letter). One of the methods by which this task is accomplished is through the preparation of a series of statewide maps entitled the Important Farmland Series Maps.

The base maps used for this series are originally drafted by the United States Department of Agriculture Soil Conservation Service. The maps are then modified to show farmland and urban areas by the California Department of Conservation. Although the primary purpose of these maps is related to

agriculture, they offer valuable information relating to the soils types and land uses within the Red Bluff Area. There are eight different classifications used this series and they include; Prime Farmland, Farmland of Stateside Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, Urban and Built-up Land, Other Land and Land Committed to Nonagricultural Use. These classifications have a minimum mapping unit of 10 acres, with the exception of grazing land, which has a minimum mapping unit of 40 acres.

All eight of the Important Farmland Mapping Series land classifications are found within the Red Bluff Planning Area. The definitions of these classification types, as described by the Department of Conservation, are located in the appendices of the element. For the geographic distribution of these classification types, please see the Important Farmland Map Series, sheet 1 of 3 for Tehama County (scale=1:100,000) or the Red Bluff series (Red Bluff East and Red Bluff West, scale=1:24,000). These maps are available at the Red Bluff Community Development Department. If there are any specific questions or information relating to the updated versions of these maps, please call the Department of Conservation at (916) 324-0859.

The Department of Conservation utilizes the definitions provided by the USDA Soil Conservation Service Important Farmland Inventory System in determining their classification criteria. This interrelationship has resulted in several internal consistencies within the two agencies' findings. One result is the determination of soil candidates for farmland classification (assigned by Department of Conservation) according to their soil mapping unit (assigned by the Soil Conservation Service).

The Department of Conservation prepared a table for soil candidate listings for both the "Prime Farmland" and "Farmland of Stateside Importance". Nineteen of the soil mapping units found in the Red Bluff Planning Area are candidates for the "Prime Farmland" soils classification, and four qualify for the "Farmland of Stateside Importance." See Appendix M for the names of these soils. This listing could be used for cross referencing and location analysis of specific soils.

The fertile soils of the Sacramento Valley and climate provide an unique growing area. These fertile soils are presently under the constant threat of urban development. The above cited Important Farmland Map Series provides scientific information as to the existence and location of agricultural soils within the Red Bluff Planning Area. There is another issue which must be addressed, lands covered by the Williamson Act (otherwise known as the California Land Conservation Act).

2) The Williamson Act

The Williamson Act provides landowners (farmers, ranchers, etc.) and local officials with the legal tools to protect agricultural land. The tool is a ten year, self renewing contract which allows farmers (and other landowners) to maintain specified land use (agriculture, ranching, open space, etc.) in exchange for preferential land assessment for property tax purposes. The City of Red Bluff is currently surrounded by either lands actively under contract or lands of recent contract termination.

The land to the East of the Sacramento River, along the Sphere of Influence periphery and into the Planning Area is encompassed with lands under contract. This pattern follows along to the south of the City and across the Sacramento River to the west.

There are several parcels (two of which are relatively large) under contract bordering Red Bank Creek to the south. Surrounding these active areas, are several parcels that withdrew from the program in 1991. Although Red Bank Creek is the southern boundary of the Planning Area, it would be advantageous of the City to consider this in land use decisions associated with the area.

There is a small parcel under contract, along Reed's Creek to the East of Paskenta Road. There is another parcel bordering this area to the south that was deactivated in 1991. Another, larger parcel exists to the east of Baker Road where it meets Brickyard Creek. The final parcel is to the south of Dibble Creek (and Highway 36) and east of Monroe Avenue. This parcel is also large and is bordered to the east by more Williamson Act lands.

D. Soil Erosion

There are two general types of erosion; geologic and accelerated. Geologic erosion is more or less a natural type of erosion that occurs at a very slow rate. This type of erosion is not usually associated with areas where human activity takes place (Soil Conservation Service 1990, 7). The process of accelerated erosion is influenced and perpetuated by human disturbance and is therefore an issue of concern for the purposes of the Natural Environment Element.

Accelerated erosion is the result of many anthropogenic activities, including; logging, bulldozing (for urban development), overgrazing, and expansion of agricultural lands. There are ways to modify the effects of these activities on soil erosion. However, before solutions can be addressed it is important to examine the forces behind the problem.

There are four major properties of the soil which can be used to determine its erodibility. These properties are; **texture**, **slope**, **structure** and **organic matter content** (Soil Conservation Service 1990, 10).

Texture, is generally considered as the most important property for purposes of soil erosion. Texture identifies the relative proportion of particles within the soil. The particles are classified by size and include, sand, silt and clay (Soil Conservation Service 1990, 10).

Slope is the relative steepness of the ground surface. As the steepness of slope increases, so does the potential for erosion. After disturbance, steep slopes are especially susceptible to the erosive forces of water. The steeper the slope the more erosivity of runoff and the bonds of soil particles begin to break more actively (Soil Conservation Service 1990, 10-11).

The **structure** of the soil is the way in which soil particles are clustered. These clusters are the result of both physical and chemical bonds.

These bonds form aggregates, which in turn form peds. Peds are visible clumps of soil that have similar size and range in undisturbed areas. However, as disturbances occur, the peds are broken down (and sometimes built up) and this consistency is lost (Soil Conservation Service 1990, 11).

Organic matter is the, "...decomposed remains of plants and animals." (Soil Conservation Service 1990, 12). This property of soil influences; soil fertility, water infiltration and storage, soil structure and erodibility. Humans can, and do increase the amount of organic matter of soil. It can be used as a means to repair soil already damaged by erosion. It is however, a slow process (Soil Conservation Service 1990, 11).

Soil erosion poses many problems and hazards for an urban community, including but not limited to; an increase in sediment load of surrounding waterways, degradation of surrounding vegetation, loss of fertile topsoil, and the accumulation of silt on sidewalks and roadways.

There are several areas in Red Bluff which exemplify the problem of soil erosion. The slope on the east side of South Main from Diamond Avenue to the Interstate 5 is one example. The efforts to seed this area were unsuccessful, and as a result the soil is continually be degraded by water and wind. The Willow Creek subdivision, currently being constructed, off of Luther Road is another example. Large amounts of fertile topsoil have been displaced as a result of grading. These areas, when left exposed, are undergoing erosion and creating the potential for future environmental hazards.

The Willow Creek subdivision is currently under construction and there is still an opportunity to mitigate the problems associated with soil erosion. The Fairway Oaks development, just south of Willow Creek on South Jackson, reflects what can happen when soil erosion is not properly mitigated. This subdivision, including the surrounding easements, provides an example of the type of soil damage that can occur. This type of soil damage, when properly considered and managed during the design stages of a project, can be effectively mitigated.

One way to determine the erosion potential of a soil, is to utilize the USDA Soil Conservation Service's capability classification for soil types. The basic purpose for this classification method is to determine agricultural suitability. There is a subclassification, e, however, which indicates the limitations of the soil due to erodibility. There are ten soil types in the Red Bluff Planning Area which have been categorized under this subclassification (e). These soils are presented in Appendix N. An on site evaluation of soil type would be a more accurate way to determine erosion potential.

E. Executive Summary

Soil is a basic resource which directly and indirectly influences other resources within the Red Bluff Planning Area. The condition of the soil directly affects the health of associated vegetation and wildlife species. The degradation of soil resources adversely affects agricultural practices. Accelerated soil erosion poses many environmental hazards,

including; degradation of water quality, soil sterility, desertification, increased sedimentation of streams, and safety hazards.

Proper planning and mitigation can help prevent and or lessen some of the soil hazards associated with urban development. In some cases this mitigation can be as simple as seeding exposed slopes, and the result is long term protection of a valuable resource.

The purpose of the following goals, objectives, policies, and implementation measures is to provide the guidelines for soil preservation and protection. Some of the policies found in the Red Bluff Land Development Policies and the Grading, Drainage and Ground Cover Policies are incorporated into this section. A list of more specific preservation methods and on site construction techniques is currently being prepared by the Planning Director and myself.

A potential for the degradation of soil resources through hazardous waste contamination does exist in the City of Red Bluff. This type of contamination also has the potential for water pollution and is addressed in the Water Resources section of the element.

GOALS

- Conserve and protect the soil resources of the Red Bluff Planning Area.
- Ensure and encourage the continued production of agricultural products.
- Conserve and improve groundwater, natural habitat, mineral, aesthetic, soil and air resources in the Red Bluff Planning Area (Land Use Element).

OBJECTIVES

- Prevent and mitigate all human induced soil erosion occurring within the jurisdiction of the City of Red Bluff..
- Protect the remaining important agricultural soils within the Red Bluff Planning Area, as identified by the Department of Conservation's Important Farmland Map Series (1:24,000)..

POLICIES

- Restrict development in areas of unstable soils.
- Encourage that all graded areas be seeded with vegetation deemed acceptable by the conditions provided by staff.
- Prepare and adopt hillside development standards, as designated by the Land Use Element.

- Direct urban development to areas of non-prime soils and encourage cluster development in areas surrounding prime agricultural soils to create a buffer.
- Discourage further development on prime agricultural soils and within riparian habitat, woodland, scenic areas and designated wetlands to preserve urban area environmental resources (Land Use Element).

IMPLEMENTATION MEASURES

- Enforce any and all of the 123 conditions and findings relating to soil preservation as presented by the City of Red Bluff.
- Implement and enforce ALL guidelines and restrictions of the Land Development Policies and the Grading, Drainage and Ground Cover Policies.
- Require an on site soil survey for all developments occurring on soils that have been given an e (erosion risk) subclassification by the USDA Soil Conservation Service's capability classification.
- Require that all new developments over 10 acres in size and or exceeding low density classification present an erosion control plan that has been approved by a certified soil erosion prevention specialist.

NATURAL ENVIRONMENT ELEMENT

VII. ATMOSPHERIC RESOURCES

A. Introduction

The City of Red Bluff is located within the Sacramento Valley Air Basin, which is a large area that has been divided into a smaller division referred to as the Northern Sacramento Valley Air Basin (NSVAB). This basin includes the counties of; Butte, Colusa, Glenn, Shasta, Sutter, Tehama, and Yuba.

The Northern Sacramento Valley Air Basin is bordered by physical barriers, which create a "bowl" type basin. The barriers include; the Coastal Mountain Range to the north and west, the Cascades (southern portion) and the Sierra Nevada Mountains (northern portion) to the east. The floor of the basin gradually slopes upward from the south to the north. To the south and southwest, there are two air basins which generate high amounts of ozone and its precursors; The Broader Sacramento Area and The San Francisco Bay Area Air Basin.

The pollutants from The Broader Sacramento Area Air Basin and The San Francisco Bay Area Air Basin are of concern to the NSVAB, and the City of Red Bluff for two reasons. The first reason is wind carried transport of pollutants. The influx of marine air into the Bay Area carries the pollutants on to the Carquinez Strait, where they will continue on to Sacramento. The prevailing northerly winds will then carry these pollutants up into the NSVAB. The second reason of concern is the physiography of the basin itself. The "bowl" type terrain acts a trap for the pollutants. It traps not only the pollutants generated within the basin, but also the pollutants transferred by winds from the more populous areas to the south.

B. Air Quality Monitoring

There are two primary agencies involved in monitoring air quality within the Red Bluff Planning Area. These agencies are; The California Air Resources Board and The Tehama County Air Pollution Control District. The California Air Resources Board monitors area and mobile pollution emissions and the Tehama County Air Pollution Control District monitors stationary sources. The Tehama County Air Pollution Control District is also responsible for the management of the air quality plan for the area, which includes the discretionary functions associated with permit issuance.

1) State Monitoring

The California Air Resources Board prepares a statewide report entitled, California; Air Quality Data on a quarterly and annual basis. The most recent of these reports available, is the July-August-September 1991 quarterly report. These reports are prepared specifically by the Air Resources Board Technical Support Division and they assess air quality for each of the 14 air basins in the state (California Air Resources Board 1990, 16).

The quarterly reports assess 19 pollutants for over 120 areas throughout the State. These pollutants include; ozone, carbon monoxide, nitric oxide, nitrogen dioxide, oxides of nitrogen, sulfur dioxide, total hydrocarbon, methane, particulate matter (10 microns), particulate sulfate (10 microns), particulate nitrate (10 microns), particulate chloride (10 microns), particulate ammonium (10 microns), total suspended particulates, suspended particulate lead, suspended particulate sulfate, suspended particulate nitrates, soiling index (coefficient of haze), and hydrogen sulfide. Future copies of this report may be acquired by calling (916) 322-2990 (California Air Resources Board 1991).

2) Regional Monitoring

In 1991, the Northern Sacramento Valley Air Basin 1991 Air Quality Attainment Plan was prepared. The purpose of the plan is to comply with and attain ambient air quality standards designated by State and Federal Law. This plan was the result of a joint effort by air quality pollution control districts and air quality management districts for the counties of; Shasta, Tehama, Glenn, Butte, Colusa, Sutter and Yuba.

The plan indicates which counties have been designated "attainment" and "non-attainment" areas by the State. These classifications are based on standards for the four criteria pollutants established by the California Clean Air Act of 1988. These pollutants are; ozone, nitrogen oxides, carbon monoxide, and suspended particulate matter less than 10 microns in diameter (PM10).

All of the counties in the NSVAB, including Tehama, have been designated as a non-attainment areas for two of the criteria pollutants; ozone and PM10. The non-attainment status, however, can be misleading as indicator for air quality. Misleading because any county which exceeds the state air quality standards for a minimum of one hour is classified as non-attainment for an entire year. A good example of how this status can be deceptive is the fact that Los Angeles County and Tehama County are both non-attainment areas for ozone.

There are two monitors in Tehama County which measure these "non-attainment" pollutants. Both monitors are located within the Red Bluff City limits. The ozone monitor is located just off of Highway 5 on the roof of the sewage treatment plant. The PM10 monitor is located behind the Tehama County Air Pollution Control District office 1750 Walnut Street. The PM10 monitor is owned by the State (Air Resources Board), on loan to the district and the ozone monitor is owned by the district (Williams 1992).

The Tehama County Air Pollution Control Board is currently performing a study on ozone levels in Red Bluff. The purpose of the study is to determine the major sources of ozone pollution. It is generally accepted that the majority of ozone in Red Bluff is created by automobile emissions. The controversy is over where those emissions are generated within the City, transported in from other areas, or produced by the highways corridors which bisect the city (Bovee 1992).

Background information and associated health affects of the two non-attainment criteria pollutants; ozone and PM10 are listed below. The most recent ozone and PM10 data are presented in Appendix O.

C. Criteria Pollutants

The following information was provided by the Northern Sacramento Valley Air Basin 1991 Air Quality Attainment Plan. According to the plan, Tehama County has a "non-attainment" status for ozone and particulate matter less than 10 microns in diameter (PM10).

1) Ozone

Ozone (O^3) is a secondary pollutant. Secondary, in that it is not directly emitted into the atmosphere, but is the result of a chemical reaction that occurs between nitrogen oxides (NOX), reactive organic gases (NOG) and sunlight. Nitrogen oxides are emitted into the air as a result of fuel combustion at high temperatures (the burning of gasoline in automobile engines). Reactive organic gases are emitted into the air in two ways; as the result of fuel combustion and through the evaporation of organic solvents. Once present in the atmosphere, a photochemical reaction occurs and ozone is formed (NSVAB Air Pollution Control and Quality Management Districts 1991, 8-9).

Ozone is considered a seasonal problem in the Northern Sacramento Valley Air Basin (NSVAB). The season of peak concern is normally April through October. The NSVAB shares the Sacramento Air Basin with the Broader Sacramento Area (BSA) which adds to the atmospheric content of ozone. The Broader Sacramento Area emissions are transported by the prevailing winds north, into the NSVAB (NSVAB Air Pollution Control and Quality Management Districts 1991, 8).

There are several health affects associated with Ozone. The majority of these affects on humans, are related to the respiratory system. Low concentrations of ozone can cause a decrease in the amount of air allowed to pass through the lungs. This is the result of increased resistance to air passage within the tissue of the lungs. At higher concentrations, ozone can cause severe damage and premature aging of lung tissue. A research project sponsored by the Air Resources Board and the University of Southern California demonstrated that there is a connection between ozone exposure and the deterioration of the alveoli.

Pre-existing health problems are also aggravated by exposure to ozone. For example, the adverse affects of asthma, bronchitis, eye irritation and cardiovascular disease can be increased by the exposure to ozone. At high levels of ozone concentration, people with respiratory and cardiovascular difficulties, become increasingly susceptible to these affects. This is especially true for the elderly, children and pregnant women. Ozone, however, can have adverse affects on people of all ages and physical conditions. Some of the more common affects include; nauseous, dizziness, headaches, coughs, and burning sensations in the chest area (NSVAB Air Pollution Control and Quality Management Districts 1991, 9).

2) Suspended Particulate Matter

Suspended particulate matter, for the purposes of this element will be those particulates with a diameter of 10 microns or less, otherwise known as PM10. The primary components of these particulates are; dust, nitrates, and sulfates. The production and release of these products into the atmosphere is a result of fuel combustion and abrasion. The automobile engine is one source of combustion, and tire and brake linings are examples of abrasion. PM10s are also released through chemical reactions (NSVAB Air Pollution Control and Quality Management Districts 199, 10).

PM10s can cause adverse health affects in humans. The small size of the particulates enables them to pass through the natural defense mechanisms and mucous membranes of the body and enter the lung tissue. Once present in the lungs they can cause damage to the alveoli. Toxic compounds (such as carcinogens) can attach to the surface of the particulates, thereby providing direct transport to the lung tissue (NSVAB Air Pollution Control and Quality Management Districts 199, 10).

Larger particulates (with a diameter of more than 10 microns) do exist and can cause irritation of the throat, nose and bronchial tubes. The natural defense mechanisms of the body, such as sneezing, however, normally protect the body from serious damage caused by these larger particulates.

D. Facility Emissions

The California Air Resources Board prepared a study entitled, Emissions By Facility Summary(1989 Draft Emission Inventory) for the Tehama Pollution Control District. As of this time, these figures have not been formally adopted. The tentative results of the study presented eight facilities in the City of Red Bluff that were under operation and emitting pollutants into the atmosphere.

Of the eight facilities emitting pollutants, six currently are currently in operation. The six facilities are; Diamond International Corporation (on Reed Avenue), Packaging Company of California (on Diamond Avenue), Louisiana Pacific Corporation (on Reading Road), Fiber Enterprises (on Vista Way), Al Bon Company (Highway 36) and Crown Plastics (on Vista Way). See Appendix P for emissions data.

The industrial facilities in Red Bluff contribute only a minor amount of air pollutants. The most critical sources are automobile emissions (Ozone) and agricultural practices (PM10) (Bovee 1992).

E. Executive Summary

The major cause of air pollution in the City of Red Bluff is vehicle emissions (ozone). The specific source of the pollution (locally generated, transported, or generated by highway corridor) has not been determined. The Tehama County Air Pollution Control Board is actively studying this problem and will have the results in the future. Once these findings are approved, they should be incorporated into this section of the Natural Environment Element.

It is also recommended that the City modify the goals, objectives, policies, and implementation measures of this section to reflect these findings.

Other sources of air pollution in the Red Bluff Planning Area include the industrial facilities cited above (PM10 and Ozone), the exposure of unconsolidated soil to wind (PM10) and agricultural practices (PM10). These issues are addressed below, with the exception agriculture. The majority of agricultural practice occur beyond the City Limits and are therefore out of the control of the City.

GOALS

- To achieve and maintain high standards of air quality within the City of Red Bluff Planning Area.
- Provide a healthy environment for all current and future inhabitants of the City of Red Bluff Planning Area.
- Increase use of alternative transportation modes (Circulation Element).

OBJECTIVES

- To achieve and maintain "attainment area" status for all of the four criteria pollutants, as designated by the State of California Air Resources Board.
- Reduce Average Daily Traffic (ADT) trips (Circulation Element).
- Promote the safety of pedestrians and cyclists on streets and roadways (Circulation Element).

POLICIES

- Encourage activities that decrease vehicular emissions, including; the safe use of bicycles, carpooling and mass transit.
- Discourage the establishment of business and or other activities which promote and or add to the degradation of air quality.
- Provide setbacks, landscaping, sound walls, and other barriers to protect adjacent land uses from noise, air pollution, and safety impacts from traffic where appropriate (Circulation Element).
- Promote use of bicycling and walking as an alternative to automobile use (Circulation Element).
- Promote the use of car and van pooling (Circulation Element).
- Encourage employers to advocate employee use of fuel-efficient transportation (Circulation Element).

- Develop alternate through-routes in downtown area in order to decrease the high concentration of emissions (Circulation Element).
- Separation of bicycle and pedestrian traffic from vehicular traffic should be encouraged, especially near schools (Circulation Element).
- Bicycle lanes should be included in construction or upgrade of roads, overpasses, and bridges (Circulation Element).
- New bicycle lanes should be connected with the existing bikeway system wherever feasible (Circulation Element).
- Existing bicycle facilities should be maintained and upgraded, and new ones added as needed (Circulation Element).

IMPLEMENTATION MEASURES

- Require all new businesses which have a potential for air pollution to submit a report which addresses anticipated emissions and alternatives.
- Implement the trail system introduced in the 1974 Parks and Recreation Plan.
- Implement all of the guidelines that reduce soil erosion and exposure as provided in the Land Development Policies and the Grading, Drainage and Ground Cover Policies.
- Develop a Transportation System Management (TSM) ordinance to promote flex-time, vanpools, bicycling, and other alternative transportation methods to employment destinations (Circulation Element).
- Develop and adopt a TSM ordinance with provisions to promote bicycling and walking as methods of transportation (Circulation Element).
- Identify and develop new bicycle and pedestrian trails, especially in areas surrounding schools, shopping areas, and employment centers (Circulation Element).
- Require separate bicycle and pedestrian lanes in each direction on any new arterial street (Circulation Element).
- Require new development and redevelopment to include bicycle routes (Circulation Element).
- Identify and develop potential locations of park-and-ride lots, especially near Interstate 5, Highway 36E, and Highway 99 (Circulation Element).
- The City should update and adopt the existing bicycle route plan (Circulation Element).

- The City should develop and adopt standards for the provision of bicycle parking facilities for public and private development (Circulation Element).

NATURAL ENVIRONMENT ELEMENT

VIII. MINERALS

A. Introduction

The Tehama County General Plan, adopted in 1983 provides an informative and general assessment of the mineral resources found within the county. The information provided in this plan is summarized in the following paragraphs.

Aggregates, including; non-metallic sand, gravel, and volcanic cinder account for the majority of mineral extraction activity in the county. These materials are typically used for construction and paving purposes. The high costs of transportation and the heavy weight and bulk of aggregates ensures that the preponderance of these materials are used for local project. Mineral extraction and construction account for approximately 4% of current employment in the county. (Tehama County 1983 111-50,51).

Although mineral extraction is somewhat limited, there is the potential for future expansion. This expansion would be controlled by both resource availability and future demand. Fourteen other mineral resources have been identified in the County by the California Division of Mines and Geology, Minerals of California; Bulletin No.189. These minerals include; aragonite, borax, chalcopyrite, chromite, copper, cristobalite, galena, garnet, opal, pectolite, penninite, sassolite, and Wallsonite (Tehama County 1983).

The most plausible mineral for future development is chromite. Chromite is used for steel production. The demand for domestically mined chromite is currently at a lull, given that the majority of the country's supply is imported (Tehama County 1983). Most of the chromite deposits are found in the western section of the county and would therefore have little or no effect on the City.

B. Local Extraction

The California Office of Mines and Geology maintains a database entitled Mine Files which includes an inventory of mining activity on a county wide basis. According to this source there are 62 mine sites located within Tehama County. These sites vary in activity status from abandoned to active.

There were four permits granted in the Red Bluff Planning Area for mineral extraction. Reflective of the county, all were for aggregate extraction. The four extraction sites were located along four creeks; Red Bank Creek, Reed's Creek, Dibble Creek, and Blue Tent Creek (Brewer 1992). The operation of Red Bank Creek has been abandoned. The Reed's Creek, Dibble Creek, and Blue Tent Creek operations are currently active, although do not operate on a year round basis. The site on Reed's Creek is owned by Sale Truck Repair. The Dibble Creek site is owned by Al-Bon Corporation. The Blue Tent Creek site is owned by Elmer Heightman and extraction is minimal and intermittent at best.

The Surface Mining and Reclamation Act provides the legal regulations and guidelines for extraction operations. As part of the Act, a permit application and review process is mandated for each extraction activity. This permit procedure is governed by the lead agency. All three sites are governed by the County. The Dibble Creek mine is the only site currently located within City Limits. The permit for this site was originally filed with the County, and the land was later annexed into the City. The Blue Tent Creek site borders the City Limits, however, the application is on file with the County.

C. Executive Summary

None of the extraction activities located within the Planning Area fall under City jurisdiction. As the City continues to grow, however, some of these sites may be annexed into City Limits. There is also current undeveloped potential for extraction within the City Limits. The City should take advantage of this situation and prepare for future mineral extraction practices.

The following goals, objective, policies and implementation measures are intended to provide guidelines for future extraction activities within the City Limits. The Surface Mining and Reclamation Act (SMAR) will also function as guide. The administration of the policies contained within this section and SMAR are the responsibility of the City.

GOALS

- Conserve the mineral resource base in the Red Bluff Planning Area.
- Conserve and improve groundwater, natural habitat, mineral, aesthetic, soil and air resources in the Red Bluff Planning Area (Land Use Element).

OBJECTIVES

- Utilize mineral resources, where extraction is deemed to have a mutually beneficial impact on the community (both environmentally and economically).
- Maintain and apply all government plans and restrictions to all active mineral extraction activities in the Red Bluff Planning Area.

POLICIES

- Discourage extraction in environmentally sensitive areas, including those areas designated by other elements of the general plan.
- Encourage the reclamation of mined lands for recreation, aesthetic, open space or other public purposes.
- Review and update all City ordinances which address the extraction of mineral resources on a regular and as needed basis.

- Ensure the protection of all non-mineral resources surrounding the site of a proposed mineral extraction area
- Require that the City monitor the environmental impacts of current and future mineral extraction activities and ensure proper mitigation for adverse affects.

IMPLEMENTATION MEASURES

- The City shall prepare and adopt a mineral extraction plan, as detailed in the Open Space Action Program of this element.
- Require a reclamation plan with each new application for a mineral extraction permit, as mandated by the Surface Mining and Reclamation Act of 1975.
- Require that all land use conflicts associated with mineral extraction be determined, considered, and mitigated in verbal and written form (conditions for approval) during the decision making process.

NATURAL ENVIRONMENT ELEMENT

IX. OPEN SPACE

A. Introduction

Open Space as defined by the State of California is, "...any parcel or area of land or water which is essentially unimproved and devoted to an open-space use..." (Governor's Office of Planning and Research 1992, 37). There are four types of open space use recognized by the State, and they are; open space for the preservation of natural resources, open space used for the managed production of resources, open space for outdoor recreation, and open space for public health and safety.

Currently, there is not an "open space" zoning classification in the City of Red Bluff. All of the city owned land is zoned under a general PS-Public Service. Public parks and recreational areas are included under this zoning classification, as is the land surrounding the airport and the sewage treatment facility. There is a subclassification, f-floodplain, under the PS zoning which indicates a more specific land use.

The following sections address the current and future possibilities for implementing the four State recognized types of open space.

B. Open Space for the Preservation of Natural Resources

This type of open space use includes areas, "...required for the preservation of plant and animal life,...for ecologic and other scientific study purposes,...rivers, streams,...banks of rivers and streams, and watershed lands." (Governor's Office of Planning and Research 1992, 37).

Greenways, an overlay zone initiated by the Land Use Element, would qualify for this type of open space. Greenways are defined as, "...continuous canopy of woodland which is found along and with varying distance adjacent to stream corridors or wetlands." (Collins 1992, 52). The purpose of Greenways is to preserve natural resources found within these wooded areas. The result is open space, which provides many assets including preservation of; habitat, soil stability, and aesthetic and recreation resources.

Designated open space areas for the preservation of natural resources can have dual purposes. Quite often the preservation of natural resources, such as vegetation, soil, and air quality has a positive impact on other resources. For example, by protecting riparian habitat we can increase; bank stability, water quality, aesthetics, recreation and provide valuable habitat for wildlife.

It is important to identify areas of high resource value, so that they may be protected and growth can be guided into more suitable, less abundant areas.

C. Open Space for the Managed Production of Resources

This type of open space use includes, "...forest lands, rangeland, agricultural land,...areas required for recharge of ground water basins,...areas containing major mineral deposits." (Governor's Office of Planning and Research 1992, 37).

There is no zoning classification for this type of open space, at present in the City of Red Bluff.

There are areas of prime agricultural soils in the Planning Area, as indicated in the Geology and Soils sections of this element. The current production of food and fiber within the City Limits, however, are relatively small in scale and have little direct importance to the City (Collins, 1992 17). The surrounding, rural areas, of the county provide an environment more conducive to large scale agricultural practices. In accordance with the Land Use Element, it should be the policy of the City to take County farmland preservation methods under consideration when making land use decisions.

There is only one active mineral extraction facility located within the Red Bluff City Limits. This site is owned by the Al-Bon Corporation and is located on Dibble Creek. The mine site was originally located in Tehama County, when the extraction permit was filed. The land was later annexed into the City. The mine type, as classified by the Office of Mines and Geology, is a gravel bar skimming operation. The mine produces sand and gravel (Office of Mines and Geology, 1992).

There are other sand and gravel extraction activities located near the City Limits. There is one site just east of Paskenta Road on Reed's Creek. There are also several abandoned and intermittent mining activities located near city limits. The Surface Mining and Reclamation Act provisions mandate that the lead agency take responsibility for permit application and approval process. These other sites, being located in the County, would therefore be out of City jurisdiction.

It is imperative to preserve not only the sand and gravel resources, but the watershed from which they are generated. A holistic view of this type of extraction would be beneficial, both from an economic and environmental stand point.

D. Open Space for Outdoor Recreation

This type of open space use includes, "...areas of outstanding scenic value, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores...rivers and streams; and areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails.." (Governor's Office of Planning and Research, 1992 37).

The City of Red Bluff currently has over 80 acres of park and recreational land (Collins, 1992 31). In 1974, the City hired Nickolas von Rotz, Jr. (a park planning consultant) to prepare the Red Bluff Park System General Plan. The

plan was completed in October of 1974. The plan cataloged eight park facilities, of which most already existed and some were anticipated for future development and or expansion. The plan also addressed a bike trail system that was to be implemented. Although the plan is currently out of date, it does provide maps of each facility.

The updated Land Use Element, prepared in 1992, accurately assesses the current park and recreational facilities available in Red Bluff. The element identifies and describes the following ten park and recreational facilities; Samuel Ayer and Dog Island, Trainor Park, Diamond Park, Forward Park, River Park and Marina, Campfire Recreation Area and Building, Carl Coleman Tennis Courts, Jackson Heights Park, Lincoln Street Tennis Courts, and Luning Street Park. For further information, see the Land Use Element and Map.

In 1991 Bryan Murphy Associates, Inc. prepared the City of Red Bluff Master Plan. The purpose of the plan was to assess current and future infrastructure needs, in order to develop a capital improvement program for the City. The Master Plan concluded that "The City has ample parks and recreational facilities due to forward planning by the City Council and Administration in the past." (Bryan Murphy, 1991, 2-25). This conclusion was based on a per capita ratio of facility availability. The current ratio exceeds 6 acres per 1,000 people. According to standards recognized by the Greenbelt Alliance, this ratio is considered adequate for an urban environment.

In a recent publication entitled, Bay Areas Public Lands, the Greenbelt Alliance identifies the people to city owned acres ratio for all of the municipalities in the Bay Area. In this report, they also present a ratio they deem adequate for city park acres per population. This ratio is 3-5 city park acres per 1,000 people (Greenbelt Alliance 1992, 8). The City of Red Bluff exceeds the low end of this standard by almost 100%. According to a linear regression model of future population growth, the City will not exceed these standards in the next ten years. See Appendix Q.

Future open space areas for the purpose of recreation are therefore considered a lower priority, when compared to the other three types of open space. The City can secure and maintain this satisfactory ratio by encouraging the inclusion of open space areas in new developments. This technique would alleviate the burden for the City to maintain these areas, while securing that these areas will exist. There are currently standards for lot coverage (% of required open space) and children's play areas in the Land Development Policies (section IV and V. B.), which are discussed further in the Open Space Action Program.

E. Open Space for Public Health and Safety

This type of open space includes, "...areas which require special management or regulation because of hazardous or special conditions such as earthquake faulty zones, unstable soil areas, floodplains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality." (Governor's Office of Planning and Research 1992, 33).

There are currently two overlay zones which could be included in this type of open space. They are floodplain (f) and Hillslope (H). Both of these overlay zones were dictated by the Land Use Element.

Floodplain overlay districts correlate with the 100 year floodplain as designated by the Federal Emergency Management Agency (FEMA). These areas are delineated on the City's Land Use Map. The purpose of this overlay is to limit and or condition any development within the floodplain for public safety purposes. The most predominant floodplain is located along the Sacramento River. There are also designated floodplain areas along the creeks which run through the City. These areas vary in width from approximately 2000 feet along Red Bank Creek, 1000 feet along Grasshopper, Dibble and Blue Tent Creeks, and 100 to 500 feet along Reed's, Brickyard and Brewery Creeks. (Collins 1992, 9).

Hillslope overlay districts occur in areas where slope exceeds 20 percent. The purpose of this type of overlay is to restrict and or modify development in these unstable areas. This is accomplished by requiring special use permits on a project by project basis within the zone. The development density is also regulated in these areas, in order to provide for public safety (Collins 1992, 9).

These two overlay zones represent the extent of open space designated for the purposes of public health and safety in the City of Red Bluff. These zones, although beneficial do not always qualify as open space. According to State Law, in cases where restricted development is allowed, these areas cannot be considered open space.

Included in the State's definition of open space, is the protection and maintenance of water quality. At present, the City of Red Bluff has an excellent source of groundwater. It is important that the City maintain this resource, including surface water. It would be advantageous for the City to consider an open space zoning classification which provides for this type of protection. In doing this, the City could accomplish many diverse objectives, including the preservation of; vegetation, stream banks, soils, recreation areas, aesthetics and wildlife habitat. This issue is addressed at further length in the Water Resources section of this element, and in other elements of the general plan.

The Safety Element addresses the natural hazards of the community at more depth. The scope of the Safety Element includes: "...the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides, subsidence and other geologic hazards....flooding; and wildland and urban fires." (Governor's Office of Planning and Research, 1992, 25).

F. Executive Summary

The City of Red Bluff has many valuable areas of open space. It is important that these areas be considered and protected while population and urbanization continues. Section X., Open Space Action Program, provides specific guidelines for the preservation, conservation and management of open space. This action program is required by State Law and functions as the goals, objectives, policies, and implementation measures for the open space section.

NATURAL ENVIRONMENT ELEMENT

X. OPEN SPACE ACTION PROGRAM

A. Introduction

It is the intent of the Natural Environment Element to satisfy the statutory requirement of the Open Space Element of a general plan. In order to secure the legal viability of this element, it is imperative that an action program be included.

Article 10.5 of California Government Code requires that, "Every local open-space plan shall contain an action program consisting of specific programs which the legislative body intends to pursue in implementing its open-space plan." (Governor's Office of Planning and Research, 1992, 34).

B. Existing Methods for Implementation

The following section discussed techniques currently available for the preservation of open space. The techniques are broken down into the four open space types.

Preservation of Natural Resources

The updated Land Use Element initiated two overlay zones which can be utilized to implement this plan. The zones are Greenways and floodplains, and they are delineated on the Land Use Map. These zones mandate additional restrictions for development and the Planning Commission is granted the power to restrict development all together.

The Land Development Policies, Section IV. Lot Coverage provides guidelines for the minimum amount of open space according to zoning district. The stated purpose for this type of open space regulation is to, "... (increase) rainfall infiltration and (reduce) storm runoff..." (Collins 1992, 5). The minimum open space is determined on a percentage basis (of total land area) and is as follows:

<u>Zoning District</u>	<u>Minimum Open Area</u>
R-1	50%
R-2	40%
R-3	33%
R-4	25%

source: Land Development Policies
Collins, William 1992, 5

Managed Production of Resources

There are no methods currently available for this type of open space preservation. Potential types of resource production in the Red Bluff Planning Area include agriculture and sand and gravel extraction. Large scale agriculture is not a feasible

type of resource production for an urban city, and therefore no future provision for this type of open space are made in this program.

Sand and gravel extraction is a potential source of managed resource production for the City. Technique #2, cited below, proposes a potential solution for future development.

Outdoor Recreation

The Land Use Element's Land Development Policies, Section V. Lot or Site Improvement, subsection B. Children's Play Areas provides guidelines for the inclusion of open space into residential developments. The guidelines apply to development projects of medium density or greater. The power to enact these provisions rests with the Planning Commission, as they are not arbitrary requirements.

Public Health and Safety

The Greenway and floodplain overlay zone, cited above, qualifies as an implementation tool for the preservation of open space for public health and safety. Projects located within the zone are subject to specific development policies (as mandated by the Land Development Policies and the Land Use Element). A stated purpose of both zones is to limit the effects of flooding on public safety. In addition, the Greenway zone is intended to decrease the potential for fire hazard.

The Land Use Element dictates standards for development on hillsides exceeding 20% slope. These areas are designated as Hillslope (H) and require a special use permit for any type of development.

The Clear Zone (CZ) is an overlay zone which extends 1300 feet from the ends of the principal runways at the Bidwell Municipal Airport. The zone is mandated in the Airport Land Use Plan and is delineated on the Land Use Map. Development is restricted in this area and it supersedes existing zoning districts in that area (Collins 1992, 10).

C. Suggested Revisions of Existing Techniques

Revision #1: Incorporate minimum lot coverage standards for all zoning classifications into section V. of the Land Development Policies.

The inclusion of all zoning classifications into this section, will provide a more comprehensive, far reaching form of open space preservation.

Revision #2: Interpret the Greenway and floodplain overlay zones so that they included specific development standards.

There are no specific standards associated with the Greenway overlay zone. Not all floodplain overlay zones are delineated on maps. Currently, the Planning Commission has the responsibility of determining and enforcing the guidelines for development in these sensitive areas. Establishing a list a detailed standards for each zone further secures their effectiveness as preservation tools.

D. New Techniques for the Preservation of Open Space

Technique #1: Prepare and adopt a city ordinance in accordance with the Quimby Act.

The Quimby Act (Government Code Section 66477 et seq) provides a method by which a local government can exact either land dedication or in lieu of fees for park and recreational purposes. The details and limits to this program can be found on pages 147-150 of the 1992 Planning, Zoning, and Development Laws.

There are several advantages to adopting this type of ordinance. It will help to secure that the City maintains an acceptable ratio of park land/population. The current ratio is 6.3 acres/1,000 people. If the present inventory of open space (for recreational purposes) remains constant, the ratio will decrease to 4.77 acres/1,000 people by the year 2002. See Appendix Q for the statistics.

One possibility is to collect "in lieu of fees" until there is adequate to money to purchase vacant land adjacent (or near) the developing area. The land could be left in its natural state, which would lessen the future fiscal responsibilities of the City. This type of open space could, depending on location, function as one or more types of open space under State classifications.

Technique #2 Prepare and adopt a resource extraction plan for the City.

This plan should address areas of potential open space for the purposes of sand and gravel extraction within the City. The areas should be assessed based on environmental, social and economic impacts. Intergovernmental agency coordination should be an implicit part of the plan.

The plan should also include any other potential extraction activities located in the Planning Area. Once complete, the plan will serve as a guide for all extraction practices within the City jurisdiction.

E. Executive Summary

The revisions and new techniques presented in this action program should be implemented immediately following the adoption of the Natural Environment Element. They, in addition to the goals, objectives, policies and implementation measures presented in other sections of the element, should be actively enforced and monitored to ensure compliance. The proper administration of these programs and policies is vital to the cumulative effectiveness of the element.

NATURAL ENVIRONMENT ELEMENT

XI. GLOSSARY

Aggregate (soil)-Many fine particles held in a single mass or cluster, such as a clod, crumb, block or prism.

Alveoli-the individual sacs in the lung where the exchange of oxygen and carbon dioxide between the and blood takes place.

Anthropogenic-involving the impact of humans, induced or altered by the presence of humans.

Aridic (torric) soil moisture regime-soils with this moisture regime are generally found in arid climates with hot and dry summers.

Broader Sacramento Area (BSA)-consists of the counties of El Dorado, Placer, Sacramento, Solano, Sutter, Yolo, and Yuba.

Calcareous-consisting of or containing calcium or any calcium compounds.

Clay-As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Cryic-the mean annual temperature is higher than 0°C (32°F), but lower than 8°C (47°F).

Drainage (natural-soil)-Refers to moisture conditions that existed during the development of the soil, as opposed to altered drainage, which is commonly the result of artificial drainage or irrigation but may be caused by the sudden deepening of channels or the blocking of drainage outlets. Seven different classes of natural drainage are recognized.

Excessively drained soils are commonly very porous and very rapidly permeable and have a low water holding capacity.

Somewhat excessively drained soils are rapidly permeable and are free from mottling throughout their profile.

Well-drained soils are typically free from mottling, moderately permeable, and commonly of medium texture.

Moderately well drained soils commonly have a slowly permeable layer in or immediately beneath the lower subsoil. They have uniform color in the surface soil and in the upper subsoil and have mottling in the lower subsoil and in the substratum.

Imperfectly or somewhat poorly drained soils are wet for significant periods but not all the time, and many soils commonly have mottlings below 6 to 16 inches in the lower surface soil and in the upper subsoil.

Poorly drained soils are wet for long periods and are light gray and generally mottled from the surface downward, although mottling may be absent or nearly so in some soils.

Very poorly drained soils are wet nearly all the time. They have a dark-gray or black surface layer and are gray or light gray with or without mottling, in the deeper parts of the profile.

Drip Line-is an imaginary boundary on the ground that is delineated by the outermost tips of the branches of tree.

Federally Listed Species:

Endangered An endangered species or subspecies is one whose prospects for survival and reproduction are in immediate jeopardy. Its peril may result from one or many causes-loss of habitat or change in habitat, overexploitation, predation, competition, disease. An endangered species must have help or extinction will probably follow.

Rare A rare species or subspecies is one that, although not presently threatened with extinction, is in such small numbers throughout its range that it may be endangered if its environment worsens. Close watch of its status is necessary.

Frigid-Mean annual soil temperature is less than 8°C (47°F), and the difference between mean winter and mean summer temperature is more than 5°C (41°F).

General Plan Guidelines-is a comprehensive guide to California's land use planning statutes, prepared by the Governor's Office of Planning and Research in accordance with Government Code Section 65040.2.

Greenway- (See Section IX - B, page 44. Also, Land Use Element)

Goal-"...is a direction-setter. It is an ideal future end, condition or state related to the public health, safety or general welfare toward which planning and planning implementation measures are directed. A goal is a general expression of community values and, therefore, is abstract in nature. Consequently, a goal is generally not quantifiable, time-dependent or suggestive of specific actions for its achievement." (Governor's Office of Planning and Research 1990,16).

Hardpan-A hardened or cemented soil horizon, or layer. The soil material may be sandy or clayey, and it may be cemented by iron oxide, silica, calcium carbonate, or other substance.

Hyperthermic-The mean annual soil temperature is 22°C (72°F) or higher, and the difference between mean summer and mean winter soil temperature is more than 5°C (41°F).

Implementation Measures-"...is an action, procedure, program or technique that carries out general plan policy. Each policy must have at least one corresponding implementation measure." (Governor's Office of Planning and Research 1990,16).

Mesic-Mean annual soil temperature is 8°C (47°F) or higher, but lower than 15°C (59°F), and the difference between mean summer and mean winter soil temperature is more than 5°C (41°F).

mmhos/cm-a unit of electrical conductivity, which is a measure of the salinity of soil.

Northern Sacramento Valley Air Basin-consists of the counties of Butte, Colusa, Glenn, Shasta, Sutter, Tehama and Yuba.

Objective-"...is a specific end, condition or state that is an intermediate step toward attaining a goal. It should be achievable and, when possible, measurable and time-specific. An objective may only pertain to one particular aspect of a goal or it may be one of several successive steps toward goal achievement. Consequently, there may be more than one objective for each goal." (Governor's Office of Planning and Research 1990,17).

Parent Material-The horizon of weathered rock or partly weathered soil material from which soil has formed.

Pergelic-The mean annual soil temperature is lower than 0°C (32°F).

Permeability-The quality of a soil horizon that enables it to transmit water or air. Terms used to describe permeability are very slow, slow, moderately slow, moderate, moderately rapid, rapid, and very rapid.

pH-a 14 point system used for measuring levels of acid and alkali in most substances, such as soils. Acids are at the lower end of the scale.

Planning, Zoning and Development Laws (PZDL)-The Governor's Office of Planning and Research prepares the PZDL on an annual basis. The content includes current planning and zoning laws and an array of miscellaneous planning related laws.

Pleistocene-refers to a geologic, glacial epoch occurring in the Quaternary period in the Cenozoic era.

Pliocene-refers to a geologic epoch occurring just after the Pleistocene epoch in the Tertiary period (also in the Cenozoic era).

Policy-"...is a specific statement that guides decision making. It indicates a clear commitment of the local legislative body. A policy is based on general plan's goals and objectives as well as the analysis of data. A policy is effectuated by implementation measures.

Riparian Habitat- "Riparian System" as defined in Section II-C on page 5 or as delineated on maps adopted by the city.

Runoff-The rate at which water flows over the surface of the soil. Relative terms are very rapid, rapid, medium, slow, very slow and ponded.

Root Protection Zone (RPZ)-is that zone which extends 1.5 times the size of the area between the tree trunk and the **drip** line of tree.

Sand-Individual fragments of rocks or minerals that have diameters ranging from 0.05 (0.002 inch) to 2.0 (0.079 inch) millimeters. Most sand grains consist of quartz, but they may be of any mineral composition. The term sand

also is applied to a soil that contains 85 percent or more sand and not more than 10 percent clay.

Silt-Mineral particles in a soil that range in diameter from 0.002 (0.000079 inch) to 0.05 (0.002 inch) millimeter. The silt is also applied to a soil that contains 80 percent or more silt and less than 12 percent clay.

Soil Moisture regimes-are used in defining soil classes at various levels in the soil taxonomy system.

Soil Profile-The sequence of natural layer, or horizons, in a soil; it extends from the surface down into the parent material.

Soil Structure-The arrangement of the primary soil particles into lumps, granules, or other aggregates. Structure is described by grade-weak, moderate, or strong; that is, the distinctness and durability of the aggregates. It is also described by the size of the aggregates-very fine, fine, medium, coarse, or very coarse; and by their shape-platy, prismatic, columnar, blocky, granular, or crumb. A soil is described as structureless if there are no observable aggregates. Structureless soils may be massive (coherent) or single grain (noncoherent).

Blocky, angularAggregates are shaped like blocks; they may have flat or rounded surfaces that join at sharp angles.

Blocky, subangularAggregates have some rounded and some flat surfaces; the upper sides are rounded.

ColumnarAggregates are prismatic and are rounded at the top.

CrumbAggregates are generally soft, small, porous, and irregular, but tend toward a spherical shape.

GranularAggregates are roughly spherical and small. They may be either hard or soft but are generally more firm and less porous than crumb and are without the distinct faces of blocky structures.

PlatyAggregates are flaky or platelike.

PrismaticAggregates have flat, vertical surfaces, and their height is greater than their width or depth.

Soil temperature regime-are used in defining soil classes at various levels in the soil taxonomy system.

Solum-The upper part of the soil profile, above the parent material, in which the processes of soil formation are active. The solum of mature soil includes the A and B horizons.

Substratum-Any layer below the solum, either conforming (C or R) or unconformity.

Surface Soil-The upper part of the soil that is ordinarily moved in tillage, or its equivalent in uncultivated soil, about 5 to 8 inches.

Texture-The relative amounts of the various size classes of soil particles, such as sand, silt and clay.

Thermic-the mean annual soil temperature is 15°C (59°F) or higher, but lower than 22°C (72°F), and the difference between mean summer and mean winter soil temperature is more than 5°C (41°F).

Ustic soil moisture regime-involves the concept of limited, but effective, soil moisture. Though implying dryness, moisture is available at a time when conditions are suitable for plant growth.

Water Table-The highest part of the soil or underlying rock material that is wholly saturated with water. In some places an upper, or perched, water table may be separated from a lower one by a dry zone.

Wetland- (See Section II-D)

Xeric soil moisture regime-typically found in Mediterranean climates where winters are moist and cool, and summers are warm and dry.

NATURAL ENVIRONMENT ELEMENT

XII. AGENCY REFERENCE LIST

California Air Resources Board
Public Information Office
P.O. Box 2815

Sacramento, California 95812
(916) 322-2990

*this is the agency responsible for the quarterly and annual air quality reports, referred to as "Blue Books".

For technical questions, you can call Dennis Goodenow at (916) 445-4292.

California Department of Conservation
Office of Land Conservation
Farmland Mapping and Monitoring Program
801 K Street, 13-71
Sacramento, California 95814
(916) 324-0859

California Department of Fish and Game
P.O. Box 606
Red Bluff, California 96080
(916) 527-2713
contact: Dave Walker (Wildlife Biologist-Red Bluff)

AND

Department of Fish and Game
P.O. Box 944290
Sacramento, California 94244-2090
(916) 322-2493
contact: Nancy Vierra (Natural Diversity Data Base)

California Department of Forestry
Integrated Hardwood Range Management Program
(916) 739-3361
contact: Cathy Blier or Greg Greenwood

Department of Water Resources
Northern District
2440 Main Street
Red Bluff, California 96080
(916) 527-6530
contact: Mr. Buer (Chief Geologist)

OR

contact: Mr. Ralph N. Hinton (Chief, Environmental Branch)

Governor's Office of Planning and Research
1400 10th Street, Suite 250
Sacramento, California 95814
(916) 445-4831
contact: Robert Cervantes (Chief, Planning Unit)

Greenbelt Alliance, People for Open Space
116 New Montgomery, Suite 640
San Francisco, California 94105
(415) 543-4291
contact: Jim Sayer (Communications Director)

Office of Mines and Geology
801 K Street, Mall Stop 14-34
Sacramento, California 95814-3532
(916) 327-1850
contact: Silvia Bender-Lamb (librarian)
(916) 445-5716
contact: Dale Stickney (general information)

Pacific Gas and Electric Company, North Valley Division
P.O. Box 340
Red Bluff, California 96080
(916) 824-5367
(916) 529-6260
contact: Thomas A. Wess (Area Manager)

Tehama County Air Pollution Control District
P.O. Box 38
Red Bluff, California 96080
(916) 527-3717
contact: Vic Williams (Air Pollution Control Officer)
Gary Bovee (Asst. Air Pollution Control Officer)

Tehama County Planning Department
Room 1, Courthouse Annex
Red Bluff, California 96080
(916) 527-2200
contact: John Brewer (Planner II)

United States Department of Agriculture
Soil Conservation Service
2 Sutter Street, Suite D
Red Bluff, California 96080
(916) 527-4231
contact: Mark Parson

NATURAL ENVIRONMENT ELEMENT

XIII. REFERENCES

- Air Resources Board 1991. Northern Sacramento Valley Air Basin, 1991 Air Quality Attainment Plan.
- Barrett, Thomas S. and Putnam Livermore 1983. The Conservation Easement in California. The Trust for Public Land, Island Press, Covelo, California.
- Brewer, John L. 1992. Interview at Tehama County Planning Department on October 2, 1992 and phone interview on November 23, 1992.
- Bovee, Gary 1992. Phone interview, Tehama County Air Pollution Control Board, assistant air pollution control officer, November 23, 1992.
- Brown, Vence & Associates and Sharrah Dunlap & Associates 1989. Tehama County Hazardous Waste Management Plan, Volume I. Tehama County.
- Brown, Vence & Associates and Sharrah Dunlap & Associates 1989. Tehama County Hazardous Waste Management Plan, Volume II; Technical Appendices. Tehama County.
- Bryan Murphy Associates 1991. City of Red Bluff 1991 Master Plan. City of Red Bluff Public Works Department.
- Burkland, David M. 1992. City of Red Bluff General Plan Draft Housing Element. City of Red Bluff Community Development Department.
- Clay, Jr., Raimond F. 1983. Planting Techniques and Materials for Revegetation of California Roadsides. U.S.D.A. Soil Conservation Service and California Department of Transportation.
- California Air Resources Board Technical Support Division 1991. California Air Quality Data; July-August-September 1991. California Environmental Protection Agency, California Air Resources Board-Vol.XXIII.
- California Air Resources Board 1990. California Air Quality Data; Summary of 1990 Air Quality Data, Gaseous and Particulate Pollutants. California Air Resources Board-Vol. XXII.
- California Air Resources Board 1977. Plan Development Program for an Air Conservation Program for California. State of California, Sacramento.
- California Air Resources Board and Tehama County Pollution Control District 1987. Summary of Area Source Emissions, 1987 Emission Inventory. State of California, Sacramento.

- California Air Resources Board and Tehama County Air Pollution Control Board 1989. Summary of Area Source Emissions, 1989 Draft Emission Inventory. State of California, Sacramento.
- California Air Resources Board and Tehama County Pollution Control District 1989. Emissions by Facility Summary 1989 Draft Emission Inventory. State of California, Sacramento.
- California Department of Census 1990. 1990 Census of Population and Housing. Department of Commerce, State of California Sacramento (Tehama County, City of Red Bluff-pgs 1-8).
- California Department of Conservation 1988. Tehama County Important Farmland Map. Resources Agency, Sacramento, California (Map 1 of 3).
- California Department of Conservation 1984. Advisory Guidelines for the Farmland Mapping and Monitoring Program. Resources Agency, Division of Land Resource Protection, Sacramento, California.
- California Department of Fish and Game 1992. Technical Description, NDDB-Geographic Information System. State of California, Sacramento.
- California Department of Fish and Game 1980. Distribution of Fish in Selected Backwaters of the Sacramento River Table 3.
- California Department of Fish and Game 1992. Wildlife Relationship Habitat Program, Tehama County.
- California Department of Water Resources, Northern District 1991. Sacramento Valley Westside Tributary Watersheds Erosion Study, Reeds Creek Watershed. The Resources Agency, State of California, Sacramento.
- Campbell, James M. 1974. Tri-County Area Planning Council General Plan, Elements: Land Use, Open Space, Conservation. City of Red Bluff, California.
- City of Petaluma 1987. Petaluma General Plan.
- City of Red Bluff Community Development Department 1992. Conditions and Findings.
- City of Red Bluff Public Works Department 1985. City of Red Bluff Water Management Plan. City of Red Bluff, California.
- City of Red Bluff Public Works Department 1990. 1990 Update Urban Water Management Plan for the City of Red Bluff. City of Red Bluff, California.

- City of Red Bluff Public Works Department 1991. Table 52004: Urban Water Production, Population Served, and Per Capita Applied Water. City of Red Bluff, California.
- City of Red Bluff Public Works Department 1991. 1991 Annual Report to the Office of Drinking Water. (submitted to the Department of Health Service by the City on March 15, 1992)
- City of Red Bluff Public Works Department 1992. Amendment to Urban Water Management Plan; Water Shortage Contingency Plan. City of Red Bluff, California.
- City of Woodland 1988. City of Woodland General Plan.
- Collins, William 1992. Land Use Element, City of Red Bluff General Plan. City of Red Bluff, California.
- Collins, William 1992. Land Development Policies. City of Red Bluff, California.
- Collins, William 1992. Grading, Drainage and Ground Cover Policies. City of Red Bluff, California.
- Collins, William 1992. City of Red Bluff Annexation Policies. City of Red Bluff, California.
- Department of Water Resources 1984. Middle Sacramento River Spawning Gravel Study. Resources Agency, Sacramento, California.
- Economic Development Corporation 1991. Tri-County Development Corporation Statistical Abstract 1990-91. Economic Development Corporation, Chico.
- Fazio, James R. (ed) Tree City USA Bulletins; The Right Tree for the Right Place (No 4), Living with Urban Soils (No 5), and How to Save Trees During Construction (No 7). Friends of Tree City USA, Nebraska City, Nebraska.
- Global Cities Project 1991. Building Sustainable Communities An Environmental Guide for Local Governments-Water Quality: Protection and Remediation. Center for the Study of Law and Politics, San Francisco
- Governor's Office of Planning and Research 1992. 1992 Planning, Zoning and Development Laws. State of California.
- Governor's Office of Planning and Research 1990. The 1990 General Plan Guidelines. State of California.
- Governor's Office of Planning and Research 1990. Putting Action Into the Open Space Element. State of California.

- Governor's Office of Planning and Research 1989. Model Tree Preservation Ordinance. State of California.
- Greenbelt Alliance 1992. Bay Areas Public Lands. The Greenbelt Alliance, San Francisco California.
- Gustafson, S.S. 1990. Ephemeral Edens. Pacific Discovery, California Academy of Sciences: Spring pgs. 23-31.
- Hagen, Bruce W., Barrie D. Coate, and Keith Oldham 1991. Compatible Plants Under And Around Oaks. California Oak Foundation, Sacramento.
- Johnson, Sharon G. and Sarah Gustafson (eds.) 1991. Care of California's Native Oaks. California Oak Foundation, Sacramento.
- Lollock, Don, Clyde Edon, Felix Smith and Neal Fishman 1988. California Wetlands; An Element of the California Outdoor Recreation Planning Program. The Resources Agency, Department of Parks and Recreation, Sacramento, California.
- Mantell, Michael A., Stephen F. Harper and Luther Propst 1990. Resource Guide for Creating Successful Communities. The Conservation Foundation, Island Press , Washington, D.C.
- McAdams, Celia Modeste 1991. City of Red Bluff General Plan Draft Circulation Element. City of Red Bluff Community and Development Department.
- Northern Sacramento Valley Air Basin Air Pollution Control and Quality Management Districts 1991. Northern Sacramento Valley Air Basin, 1991 Air Quality Attainment Plan.
- Office of Mines and Geology 1992. Tehama County; Mine Files (text only). Department of Conservation, Resources Agency.
- Office of Mines and Geology 1977. Geologic Map of California; Redding Sheet. Department of Conservation, Resources Agency.
- Schiffman, Irving 1989. Alternative Techniques for Managing Growth. The Institute of Governmental Studies, University of California at Berkeley.
- Soil Conservation Advisory Committee 1987. Conserving the Wealth of the Land; A Plan for Soil Conservation. California Department of Conservation, Sacramento, California.
- Soil Conservation Service and University of California Agricultural Experiment Station 1967. Soil Survey, Tehama County California. United States Department of Agriculture, Washington, D.C.
- Soil Conservation Service 1990. Soil Erosion By Water. United States Department of Agriculture, Agriculture Information Bulletin 513.

- Stokes, Samuel N., A. Elizabeth Watson, Genevieve P. Keller, and J. Timothy Keller. Saving America's Countryside: A Guide to Rural Conservation. For the National Trust for Historic Preservation, The John Hopkins University Press, Baltimore and London 1989.
- Tehama County Air Pollution Control District, and California Air Resources Board 1991. Northern Sacramento Valley Air Basin, 1991 Air Quality Attainment Plan.
- Tehama County Planning Department 1983. Tehama County General Plan.
- United State Bureau of Reclamation 1992. Draft Environmental Assessment, Red Bluff Diversion Dam Pilot Pumping Plant Program October 33p and appendices.
- United States Forest Service 1990. Lake Red Bluff Recreation Development Final EIS. United States Department of Agriculture, Mendocino National Forest, Corning Ranger District.
- Vence (See Brown, Vence & Associates)
- Warner, Richard E. and Kathleen M. Hendrix 1985. Riparian Resources of the Central Valley and California Desert. California Department of Fish and Game, Sacramento California.
- Wetland Training Institute, Inc. 1989. Field Guide for Wetland Delineation; Unified Federal Method. Roolesville, Maryland.
- Williams, Vic 1992. Interview on April 4, 1992 in Red Bluff at Tehama County Air Pollution Control Board Office, air pollution control officer, 1750 Walnut Street, Red Bluff.

APPENDIX A

Summary of Statutory Responsibilities and Requirements

Section 65300 of the California 1992 Planning, Zoning, and Development Laws states that,

"...Each planning agency shall prepare and the legislative body of each county and city shall adopt a comprehensive, long-term general plan for the physical development of the county or city, and of any land outside its boundaries which in the planning agency's judgment bears relation to its planning." (Governor's Office of Planning and Research 1992, 26-27).

State Law also requires that seven mandatory elements be included in this plan. These elements are; Land Use, Circulation, Housing, Conservation, Open Space, Noise and Safety. There are specific requirements and guidelines for each element. These requirements are addressed below for the Conservation and Open Space elements.

Conservation

The statutory responsibilities of the Conservation Element, as indicated by Section 65302(d) of the California 1992 Planning, Zoning, and Development Laws is as follows;

"...(d) A conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals and other natural resources. That portion of the conservation element including waters shall be developed in coordination with any countywide water agency and with all district and city agencies which have developed, served, controlled or conserved water for any purpose for the county or city for which the plan is prepared. The conservation element may also cover:

- (1) The reclamation of land and waters.
- (2) Prevention and control of the pollution of streams and other waters.
- (3) Regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan.
- (4) Prevention, control, and correction of the erosion of soils, beaches, and shores.
- (5) Protection of watersheds.
- (6) The location, quantity and quality of the rock, sand and gravel resources.
- (7) Flood control.

Open Space

The statutory responsibilities of the Open Space Element are more detailed and lengthy than those of the Conservation Element. Under the above cited Section (65302) there are no direct responsibilities stated for the Open Space Element. These requirements are found in Article 10.5 which commences with Section 65560. Due to the complexity and length of these statutes, a brief, more concise selection of the law is presented here. In general, State Law defines that:

"...(b) "Open-space land" is any parcel or area of land or water which is essentially unimproved and devoted to an open-space use as defined in this section, and which is designated on a local, regional, or state open-space plan as any of the following:

(1) **Open space for the preservation of natural resources**, including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands.

(2) **Open space used for the managed production of resources**, including, but not limited to forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of ground water basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.

(3) **Open space for outdoor recreation**, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.

(4) **Open space for public health and safety**, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoir and area required for the protection enhancement of air quality." (Governor's Office of Planning and Research 1992, 37).

The Legislature also defines the policy and intent of open space lands. A clear understanding of these policies and intent is crucial to the appropriate administration and implementation of an open space plan. Section 65561 and 65562 of Article 10.5 of the California 1992 Planning, Zoning, and Development Laws address these issues:

Section 66561 The Legislature finds and declares as follows:

- (a) That the preservation of open space land, as defined in this article, is necessary not only for the maintenance of the economy of the state, but also for the assurance of the continued availability of land for the production of food and fiber, for the enjoyment of scenic beauty, for recreation and for the use of natural resources.
- (b) That discouraging premature and unnecessary conversion of open space land to urban uses is a matter of public interest and will be of benefit to urban dwellers because it will discourage non-contiguous development patterns which unnecessarily increase the costs of community services to community residents.
- (c) That the anticipated increase in the population of the state demands that cities, counties, and the state at the earliest possible date make definite plans for the preservation of valuable open space and take positive action to carry out such plans by the adoption and strict administration of laws, ordinances, rules and regulations as authorized by this chapter or by other appropriate methods.
- (d) That in order to assure that the interests of all its people are met in the orderly growth and development of the state and the preservation and conservation of its resources; it is necessary to provide for the development by the state, regional agencies, counties and cities, including charter cities, of statewide coordinated plans for the conservation and preservation of open space land.
- (e) That for these reasons this article is necessary for the promotion of the general welfare and for the protection of the public interest in open space land.

Section 66562 It is the intent of the Legislature in enacting this article:

- (a) To assure that cities and counties recognize that open space land is a limited and valuable resource which must be conserved wherever possible.
- (b) To assure that every city and county will prepare and carry out open space plans which, along with state and regional open space plans, will accomplish the objectives of a comprehensive open space program.

It is also required that every local open space plan, "...shall contain an action program consisting of specific programs which the legislative body intends to pursue in implementing its open-space plan." (Governor's Office of Planning and Research 1992, 34)

There are several clauses that require internal consistency between the actions of the city or county and the open space element. These requirements are found in Section 65566 and 65567. They are as follows:

Section 65566 Any action by a county or city by which open space land or any interest therein is acquired or disposed of or its use restricted or regulated, whether or not pursuant to this part, must be consistent with the local open space plan.

Section 65567 No building permit may be issued, no subdivision map approved, and no open space zoning ordinance adopted, unless the proposed construction, subdivision or ordinance is consistent with the local open space plan.

In addition to the responsibilities dictated by Article 10.5 for the preparation of an Open Space Element, Article 4 of the California 1992 Planning, Zoning, and Development Laws requires that:

"Every city and county...shall prepare and adopt an open-space zoning ordinance consistent with the local open-space plan adopted pursuant to Article 10.5..." (Governor's Office of Planning and Research 1992, 74).

APPENDIX B

Related Case Laws and
Other Planning Laws
Adapted directly from the
1990 General Plan Guidelines

CASE LAW

Save El Toro Assn. v. Days (1977) 74 Cal.App.3d 64, reinforces the open-space plan requirement. The California Court of Appeal held that because the city of Morgan Hill had not adopted an open-space plan, the city could not acquire, regulate or restrict open space land or approve a subdivision map. Mere adoption, however, does not protect a local jurisdiction from the adverse consequences of a law suit challenging an open-space element. An open-space element must also meet the specifications of the Government Code, including an inventory of open space resources.

Sierra Club v. Kern County (1981) 126 Cal.App.3d 698, voided a precedence clause that gave a land use element priority over an open-space element on the grounds that it violated Government Code Section 65300.5 (requiring that elements of a general plan comprise an integrated, internally consistent and compatible statement of policy).

No Oil, Inc. v. City of Los Angeles (1988) 196 Cal.App.3d 223, offers an interpretation of the meaning of the term "open space for the managed production of resources." A citizens' group challenged the city's approval of oil drilling zones in a coastal area designated as open space by the Brentwood-Pacific Palisades district plan. Absent specific contradictory language in the district plan, the court held that because oil recovery is the managed production of a natural resource it was therefore consistent with the plan's open space areas. In light of this decision, it is strongly recommended that local general plans specify the types of land use which are intended to comprise open space.

Kings County Farm Bureau v. City of Hanford (1990) 221 Cal.App.3d 692 (as modified by 222 Cal.App.3d 516a) the California Court of Appeal affirmed that a general plan may consist of several documents. Nevertheless, the information in associated documents, when not referenced by the general plan, may not compensate for deficiencies in the conservation element.

PLANNING LAW

Bicycle Paths (Streets and Highways Code Section 1712)

California Bikeways Act (Streets and Highways Code Sections 2370-2394)

California Endangered Species Act (Fish and Game Code Sections 2050 et seq.)

California Environmental Quality Act (CEQA) (Public Resources Code Sections 21000 et seq.)

California Environmental Quality Act (CEQA) Guidelines (California Administrative Code Title 14, Sections 15000 et seq.)

California Land Conservation Act of 1965 (Government Code 51200 et seq.)

California Recreational Trails Act (Public Resources Code Sections 5070 et seq.)

California Urban Forestry Act of 1978 (Public Resources Code Section 4799.06-4799.12)

Conservation Easements (Civil Code Sections 815-816)

Flood Plain Regulations (Water Code Sections 8400-8415)

Hazardous Waste Planning (Tanner) (Government Code Sections 65963.1, 66780.8; Health and Safety Code Sections 25135, 25199)

Open-Space Easements (Government Code Sections 51050 et seq.)

Open-Space Easement Act of 1974 (Government Code Sections 51070 et seq.)

Open-Space Land Enforceably Restricted, Property Tax Assessment (Revenue and Taxation Code Sections 421 et seq.)

Open Space Maintenance District (Government Code Sections 50575 et seq.)

Open Space and Areas, preservation by City or County Acquisition of Interests or Rights (Government Code Sections 6950 et seq.)

Regional Park, Park and Open-Space, and Open-Space Districts (Public Resources Code 5500 et seq.)

Wild and Scenic Rivers Act (Public Resources Code Sections 5093.50 et seq.)

APPENDIX C

Potential Species of Birds

Great blue heron	Northern saw-whet owl
Great egret	Common nighthawk
Snowy egret	Common poorwill
Green-backed heron	Black swift
Black-crowned night heron	White-throated swift
Wood duck	Black-chinned hummingbird
Mallard	Anna's hummingbird
American wigeon	Calliope hummingbird
American wigeon	Belted Kingfisher
Hooded merganser	Lewis' woodpecker
Common merganser	Acorn woodpecker
Turkey vulture	Yellow-breasted sapsucker
Osprey	Red-breasted sapsucker
Black-shouldered kite	Nuttall's woodpecker
Bald eagle	Downy woodpecker
Northern harrier	Hairy woodpecker
Sharp-shinned hawk	Northern flicker
Cooper's hawk	Western wood-pewee
Northern goshawk	Willow flycatcher
Red-shouldered hawk	Hammond's flycatcher
Swainson's hawk	Dusky flycatcher
Red-tailed hawk	Western flycatcher
Ferruginous hawk	Black phoebe
Rough-legged hawk	Ash-throated flycatcher
Golden eagle	Western kingbird
American kestrel	Purple martin
Merlin	Tree swallow
Peregrine falcon	Violet-green swallow
Prairie falcon	Ringed-necked pheasant
Northern rough-winged swallow	Bank swallow
Turkey	Cliff swallow
California quail	Barn swallow
Mountain quail	Steller's jay
Virginia rail	Scrub jay
Band-tailed pigeon	Black-billed magpie
Mourning dove	Yellow-billed magpie
Yellow-billed cuckoo	American crow
Common barn-owl	Common raven
Flammulated owl	Mountain chickadee
Western screech-owl	Chestnut-backed chickadee
Great horned owl	Plain titmouse
Northern pygmy-owl	Bushtit
Long-eared owl	Red-breasted nuthatch
Short-eared owl	White-breasted nuthatch
Brown creeper	Lark sparrow
Canyon wren	Savannah sparrow
Bewick's wren	Fox sparrow
House wren	Song sparrow
Winter wren	Lincoln's sparrow

Marsh wren
Ruby-crowned kinglet
Golden-crowned kinglet
Blue-gray gnatcatcher
Western bluebird
Swainson's thrush
Hermit thrush
American robin
Varied thrush
Wrentit
Northern mockingbird
California thrasher
Cedar waxwing
Phainopepla
Loggerhead shrike
Solitary vireo
Warbling vireo
Nashville warbler
Yellow-rumped warbler
Black-throated gray warbler
MacGillivray's warbler
Wilson's warbler
Western tanager
Blue grosbeak
Rufous-sided towhee
Chipping sparrow

Golden-crowned sparrow
White-crowned sparrow
Dark-eyed junco
Brewer's blackbird
Red-winged blackbird
Brown-headed cowbird
Northern oriole
Purple finch
House finch
Pine siskin
Lesser goldfinch
American goldfinch
Evening grosbeak
Northern shrike
European starling
Hutton's vireo
Orange-crowned warbler
Yellow warbler
Townsend's warbler
Hermit warbler
Common yellowthroat
Yellow--breasted chat
Black-headed grosbeak
Lazuli bunting
Brown towhee

source: Lake Red Bluff Recreation Development, Final EIS (USDA) 1990
(Proposed Sacramento River National Wildlife Refuge Environmental
Assessment) (March 16, 1989-USFWS))

APPENDIX D

Potential Species of Fish

Sacramento River

Chinook salmon
King salmon
steelhead trout
rainbow trout
striped bass
largemouth bass
smallmouth bass
American shad
Threadfin shad
green sturgeon
white sturgeon

Tributaries

Pacific lamprey	striped bass
green sturgeon	green sunfish
white sturgeon	redeer
American shad	bluegill
Treadfin shad	largemouth bass
Chinook salmon	smallmouth bass
steelhead trout	Tule perch
rainbow trout	sculpins
carp	King salmon
Sacramento squawfish	stickleback
roach	white catfish
hitch	channel catfish
Sacramento blackfish	bullheads
hardhead	mosquitofish
golden shiner	Sacramento sucker
Threespine sticlebac	

sources: Draft Environmental Assessment, Red Bluff Diversion Dam Pilot Pumping Plant Program, United States Bureau of Reclamation, October, 1992 and Distribution of Fish in Selected Backwaters of the Sacramento River (TABLE 3) California Department of Fish and Game (unpublished) 1980.

APPENDIX E

Potential Species of Mammals

Virginia opossum	Black rat
Vagrant shrew	Norway rat
Ornate shrew	House mouse
Broad-footed mole	Western jumping mouse
Little brown myotis	Porcupine
Yuma myotis	Coyote
Long-eared myotis	Gray fox
Finged myotis	Black bear
Long-legged myotis	Ringtail
California myotis	Raccoon
Small-footed myotis	Badger
Silver-haired bat	Long-tailed weasel
Western pipistrelle	Western spotted skunk
Big brown bat	Striped skunk
Red bat	River otter
Hoary bat	Mountain lion
Spotted bat	Wild pig
Townsend's big-eared bat	Elk
Pallid bat	Mule deer
Brazilian free-tailed bat	Feral goat
Western mastiff bat	Desert cottontail
Brush rabbit	Allen's chipmunk
Black-tailed jack rabbit	Sonoma chipmunk
California ground squirrel	Gray squirrel
Golden-mantled ground squirrel	Northern flying squirrel
Western gray squirrel	Northern pocket gopher
Great basin pocket mouse	Beaver
Western harvest mouse	Deer mouse
Brush mouse	Pinyon mouse
Dusky-footed woodrat	Bushy-tailed woodrat
California vole	Creeping vole
Muskrat	

source: Lake Red Bluff Recreational Development, Final EIS 1991, USDA Forest Service (Proposed Sacramento River National Wildlife Refuge Environmental Assessment, March 16, 1989) (USFWS)).

APPENDIX F

Potential Species of Reptiles

Western pond turtle	Western fence lizard
Coast horned lizard	Western skink
Gilbert's skink	Western whiptail
Southern alligator lizard	Ringneck snake
Sharp-tailed snake	Racer
Coachwhip	Striped racer
Gopher snake	Common kingsnake
California mountain kingsnake	Common garter snake
Western terrestrial garter snake	Night snake
Western aquatic garter snake	Western rattlesnake

source: Lake Red Bluff Recreation Development, Final EIS (USDA)
1990.

APPENDIX G

Potential Species of Amphibians

Tiger salamander	Northwestern salamander
Pacific giant salamander	Rough-skinned newt
California newt	Red-bellied newt
Ensatina	Black salamander
California slender salamander	Western toad
Pacific treefrog	Bullfrog
Foothill yellow-legged frog	

source: Lake Red Bluff Recreation Development, Final EIS (USDA) 1990.

APPENDIX H

Water Quality Data

PARAMETER	UNITS	MAXIMUM CONTAINMENT LEVEL	RANGE OF TEST WATER VALUES
CLARITY Turbidity	NTU	0.5	N/A
MICROBIOLOGICAL Coliform Bacteria	Portions Positive	10% per month	Standards Met Monthly
ORGANIC CHEMICALS			
Total Trihalomethanes	mg/L	0.10	No detectable
Endrin	mg/L	0.0002	" "
Lindane	mg/L	0.004	" "
Benzene	mg/L	0.001	" "
Carbon Tetrachloride	mg/L	0.0005	" "
1,4-Dichlorobenzene	mg/L	0.005	" "
1,2-Dichloroethane	mg/L	0.0005	" "
1,1-Dichloroethylene	mg/L	0.006	" "
1,3-Dichloropropene	mg/L	0.0005	" "
Ethylbenzene	mg/L	0.680	" "
Monochlorobenzene	mg/L	0.030	" "
1,1,2,2-Tetrachloroethane	mg/L	0.001	" "
Tetrachloroethylene	mg/L	0.005	" "
1,1,2-Trichloroethane	mg/L	0.200	" "
Trichloroethylene	mg/L	0.032	" "
Vinyl Chloride	mg/L	0.005	" "
Xylenes	mg/L	0.0005	" "
Cis-1,2-Dichloroethylene	mg/L	0.750	" "
Trans-1,2-Dichloroethylene	mg/L	0.006	" "
1,1-Dichloroethane	mg/L	0.005	" "
1,2-Dichloropropane	mg/L	0.005	" "
Trichlorofluoromethane (Freon 11)	mg/L	0.15	" "
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	mg/L	1.2	" "
INORGANIC CHEMICALS			
Aluminum	mg/L	1.0	next testing
Arsenic	mg/L	0.05	< .0005 mg/L
Barium	mg/L	1.0	< .01 mg/L
Cadmium	mg/L	0.010	< .0001 mg/L
Chromium	mg/L	0.05	< .001 mg/L
Fluoride	mg/L	1.4-2.4*	.1-.28 mg/L
Lead	mg/L	0.05	< .0001 mg/L
Mercury	mg/L	0.002	< .001 mg/L
Nitrate (as NO ₃)	mg/L	45.0	< 1-10 mg/L
Selenium	mg/L	0.01	< .0005 mg/L
Silver	mg/L	0.05	< .001 mg/L
RADIOACTIVITY Gross Alpha Activity	pCi/L	15	0-2

PARAMETER	UNITS	MAXIMUM CONTAINMENT LEVEL	RANGE OF TEST WATER VALUES
OTHER			
Color	Units	15.0	<3
Odor Threshold	Units	3.0	<1
Chloride	mg/L	500	5-20 mg/L
Copper	mg/L	1.0	<.005 mg/L
Foaming Agents (MBAS)	mg/L	0.5	
Iron	mg/L	0.3	<.01 mg/L
Manganese	mg/L	0.05	<.003 mg/L
Sulfate	mg/L	500.0	<1-10 mg/L
Zinc	mg/L	5.0	<.005 mg/L
Total Dissolved Solids	mg/L	1,000.0	127-210 mg/L
ADDITIONAL CONSTITUENTS ANALYZED			
pH	Std. Units	No Standard	7.3-7.8
Hardness	mg/L	" "	60-113 mg/L
Sodium	mg/L	" "	12-23 mg/L
Calcium	mg/L	" "	14-24 mg/L
Potassium	mg/L	" "	.5-2.5 mg/L
Magnesium	mg/L	" "	6-13 mg/L
Mg/L = Milligram per liter (parts per million) pCi/L = Pico Curies per liter * Fluoride Standard depends on temperature			

source: City of Red Bluff Annual Water Report, 1991, City of Red Bluff Public Works Department.

APPENDIX I

Hazardous Household Wastes

Pesticides

Garden
Indoor insects (eg. flea spray)
Outdoor insects
Fertilizer/pesticide mixtures
Fungicides (eg. wood preservatives)

Polish

Automobile
Furniture
Floor
Shoe
Leather
Metal

Adhesives and Sealants

Caulk
Solvent-based adhesives

Batteries

Household (alkaline)
Rechargeable
Automotive
Other

Household Cleaners

Floor
Furniture
General purpose
Rug
Upholstery
Window
Bleach
Spot Remover

Automotive Products

Motor oil
Transmission fluid
Hydraulic fluid
Carburetor cleaner
Radiator cleaner
Antifreeze
Engine cleaner
Lubricant
Used oil filters
Waste oil

Paint and Coatings

Solvent and thinner
Oil based paint
Water based paint
Varnish and stain
Spray paint
Auto paint

source: Tehama County Hazardous Waste Management Plan, Volume I
Brown, Vence & Associates and Sarrah Dunlap & Associates, 1989.

APPENDIX J

Hazardous Household Waste Disposal

Tehama County does not currently have a household hazardous waste disposal program or storage/disposal site. The most feasible disposal location for Red Bluff residents is the Benton Transfer Station in Redding. A recycling center is also located on site.

BENTON TRANSFER STATION
2001 Buena Ventura Boulevard
Redding, California 96001
(916) 225-4109

Recyclables

Cardboard
Glass
Milk Jugs
Newspaper
Metal
(anything in a condition
to be reused)

Hazardous Waste

Waste Oil (25¢/gal)
Latex Paint (no charge-by
appt. only 225-4520)
Anti-freeze (\$1.00/gal)
Lead-Acid Batteries (free)
Used Oil Filters, fully
drained (25¢/filter)

Business Hours

Tuesday through Saturday; 8am to 5pm

Location

South of Placer Street, North of Starlight Blvd. on
Buena Ventura Blvd.

APPENDIX K

Soil Types

MAP SYMBOL	SOIL	ACRES	PERCENT SLOPES
AvA	Arbuckle gravelly loam	17,454	0 to 3
Aw	Arbuckle gravelly loam, clayey substratum	676	0 to 3
Ay	Arbuckle gravelly loam, clayey substratum, channeled	12,926	
Au	Arbuckle gravelly fine sandy loam	4,174	0 to 3
Cc	Clear Lake clay	1,280	
CmA	Columbia fine sandy loam	2,073	0 to 3
CmB	Columbia fine sandy loam	1,315	3 to 8
CsA	Columbia silt loam	6,334	0 to 3
CsB	Columbia silt loam	1,270	3 to 8
Cu	Columbia complex, channeled	8,367	
CxB2	Corning-Newville gravelly loams, eroded	36,712	3 to 10
CyB	Corning-Redding gravelly loams	22,783	0 to 5
Cz	Cortina gravelly fine sandy loam	1,858	
Czs	Cortina very gravelly fine sandy loam	1,443	
HgA	Hillgate loam	11,462	0 to 3
Hl	Hillgate silt loam	4,046	0 to 3
Mc	Maywood fine sandy loam	706	0 to 3
Md	Maywood fine sandy loam, moderately deep	562	0 to 3
Mh	Maywood silt loam	628	0 to 3
Mf	Maywood loam, high terrace	4,948	0 to 3
NhB	Nacimiento-Newville complex	3,595	3 to 10
NrD	Newville gravelly loam	36,798	10 to 30

MAP SYMBOL	SOIL	ACRES	PERCENT SLOPES
NrB	Newville gravelly loam	1,683	3 to 10
NrD2	Newville gravelly loam, eroded	15,195	10 to 30
NrE	Newville gravelly loam	91,281	30 to 50
PkA	Perkins gravelly loam	7,329	0 to 3
PkB	Perkins gravelly loam	1,433	3 to 8
Rg	Red Bluff gravelly loam	9,493	0 to 3
Rh	Red Bluff gravelly loam, hardpan substratum	2,115	0 to 3
Rb	Red Bluff loam	461	0 to 3
RnA	Redding gravelly loam	7,788	0 to 3
RnB	Redding gravelly loam	486	3 to 8
Rr	Riverwash	17,592	
TaA	Tehama loam	9,239	0 to 3
TaB	Tehama loam	8,492	3 to 8
Tb	Tehama gravelly loam	919	0 to 3
Za	Zamora loam	1,960	0 to 3

source: Soil Survey, Tehama County, USDA Soil Conservation Service

APPENDIX L

Description of Soil Types
Adapted directly from the
Soil Survey, Tehama County California

The following information has been taken directly from the Soil Survey, Tehama County California, and applies specifically to the soils found within the Red Bluff Planning Area. The soils are presented in alphabetical order, according to soil series. General information is provided for each series, followed by a more detailed description of individual soil types.

ARBUCKLE SERIES

General Information

Soils of the Arbuckle series are nearly level to gently sloping, well drained, and gravelly. They formed in gravelly alluvium derived from sedimentary and metamorphic rocks. The alluvium contains many, light-colored pebbles of quartz and chert.

These soils have a surface soil of brown, slightly acid gravelly loam or fine sandy loam. The subsoil is brown, neutral gravelly clay loam or loam. It generally grades to a substratum of very gravelly sandy loam, but in places the substratum is dense and slowly permeable.

Arbuckle soils are along most of the streams west of the Sacramento River at elevations between 200 and 1,000 feet. Grass and oak make up the vegetation.

Arbuckle gravelly loam, 0 to 3 percent slopes (AvA)-This soil is along streams west of the Sacramento River. Some of the areas are more than 500 acres in size, and many areas are long and narrow. Drainage is good, runoff is slow, and permeability is moderate to moderately rapid. The available water holding capacity is moderate, and fertility is also moderate. There is no erosion hazard. The gravel in the soil interferes with preparation of the seedbed and causes the implements used in cultivating the soil to wear excessively. This soil does not hold as much water as soils that are not gravelly, and it therefore requires more frequent irrigation. Test show that plants growing in a greenhouse in material from the surface layer of this soil respond if nitrogen and phosphate are applied. Included with this soil in mapping are small areas of Cortina, Hillgate, Maywood, and Tehama Soils.

Arbuckle gravelly loam, clayey substratum, 0 to 3 percent slopes (Aw)- This soil is underlain by very slowly permeable clay or partly consolidated siltstone at depths of 3 to 6 feet. The water table is high during years of high rainfall and when excess irrigation water accumulates. Runoff and permeability are slow. The available water holding capacity and fertility are moderate. Included with this soil mapping are small areas of Hillgate, Maywood, and Tehama soils. Also included are some Arbuckle soils in the Paskenta area that are underlain by hard shale.

Arbuckle gravelly loam, clayey substratum, channeled (Ay)-This soil is along narrow drainageways in low foothills in the western part of the county. It

is channeled by meandering, intermittent streams but otherwise similar to Arbuckle gravelly loam, clayey substratum, 0 to 3 percent slopes. The streams have cut the soil into areas as small as 20 acres. The areas adjoin the sloping to steep foothills through which the streams flow. Their size and location are such that they cannot be managed separately from the adjoining soils on the foothills. Included with this soil in mapping are small areas of Cortina, Maywood, and Tehama soils.

Arbuckle gravelly fine sandy loam, 0 to 3 percent slopes (Au)-This soil has a gravelly fine sandy loam surface soil but otherwise is similar to Arbuckle gravelly loam, 0 to 3 percent slopes. It holds less water than the Arbuckle gravelly loam and therefore requires more frequent irrigation. Irrigation runs should be short because the water moves through the soils moderately rapidly.

CLEAR LAKE SERIES

General Information

The Clear Lake series consists of nearly level, dark-colored, poorly drained soils. These soils formed in alluvium derived from areas of sedimentary rocks. These soils are very dark gray, neutral clay to a depth of 2 to 3 feet. The subsoil is light-gray or light yellowish-gray, calcareous clay loam or clay. Clear Lake soils are in basins west of the Sacramento River. All of the acreage in Tehama County has been cultivated.

In color the A horizon ranges from black to very dark grayish brown, and the C horizon, which is generally mottled, from light gray to light yellowish brown. In some places pebbles occur in the A horizon. This horizon is slightly acid or neutral. The C horizon ranges from clay loam to clay in texture, and in some places it is gravelly. This horizon is generally calcareous. In many places during the winter, the water table is 3 to 5 feet below the surface, but when the soils are irrigated during the summer, it is less than 5 feet below the surface in places. Cracks 1 to 3 inches wide occur in the soils in summer. Tongues of material from the A and C horizons extend downward in most areas.

Clear Lake clay (Cc)-This is the only Clear Lake soil mapped in the county. It is smooth and nearly level and is in small basins on low terraces west of the Sacramento River. Drainage is poor, and runoff and permeability are very slow. The available water holding capacity is moderate, and fertility is also moderate. There is no erosion hazard. The soil stays wet during most of the winter, which also makes it difficult to manage. Plants growing in the greenhouse on this soil respond to fertilizer that contains nitrogen and phosphate. Included with this soil in mapping are small areas of Hillgate and Tehama soils.

Columbia Series

General Information

The Columbia series consists of nearly level to gently sloping, brown, well-drained, neutral soils that are medium textured to moderately coarse

textured. These soils formed in alluvium from sedimentary, metamorphic, and igneous rocks. They are on recent flood plains along the Sacramento River and Cottonwood Creek. The vegetation is hardwoods, shrubs, and grass.

Row crops, field crops, and orchard crops grow well in most areas of these soils. In areas near the Sacramento River the soils are cut by partly abandoned stream channels, and in places near the river they are subject to overflow during winters of high rainfall. Flooding has been considerably reduced, however, since Shasta Dam was built.

These soils range in color from brown and pale brown to grayish brown throughout. Where organic matter has accumulated on the surface, an A horizon has formed, and the surface soil is a little darker than the horizons below. Texture of the surface soil ranges from silt loam to loamy sand, and in places near the river the subsoil is gravelly. These soils are slightly acid to neutral in the surface soil and neutral to mildly alkaline in the subsoil. The lower part of the subsoil is very slightly calcareous in places.

Columbia fine sandy loam, 0 to 3 percent slopes (CmA)-This soil is on flood plains along the Sacramento River and Cottonwood Creek, and some areas are 100 acres or more in size. Most areas are nearly level and smooth and have been cut by abandoned stream channels in a few places. Drainage is good, runoff is very slow, and permeability is moderately rapid. The available water holding capacity and fertility are moderate. Plants growing in the greenhouse on this soil respond to fertilizer that contains nitrogen and phosphate. Streaming erosion is a hazard to areas that adjoin the main stream channel. Included with this soil in mapping are small areas that have a gravelly subsoil and some areas of Zamora soils.

Columbia fine sandy loam, 3 to 8 percent slopes (CmB)-This soil is in areas that are cut by several channels of abandoned streams. The surface is mostly smooth but partly rounded in places cut by stream channels. Runoff is slow, and the erosion hazard is slight.

Columbia silt loam, 0 to 3 percent slopes (CsA)-This soil is in large areas along the Sacramento River and Cottonwood Creek. The areas are far enough above the streams so that the soil is seldom affected by flooding. Most areas are smooth, though some areas are cut by channels of abandoned streams. This soil is well drained, runoff is very slow, and permeability is moderate. The available water holding capacity and fertility are high. There is no erosion. During irrigation the surface of the soil tends to seal over, and in some places it is difficult for water to move into the soil. Otherwise, this is one of the most productive soils in the county. If organic matter is mixed with the soil, it helps to control sealing. Included with this soil in mapping are small areas of Columbia soils that have a surface layer of loam or a subsoil that is gravelly. Also included are a few small areas of Zamora soils.

Columbia silt loam, 3 to 8 percent slopes (CsB)-This soil is cut by channels of abandoned streams but is otherwise similar to Columbia silt loam, 0 to 3 percent slopes.

Columbia complex, channeled (Cu)-This complex is near the main channels of the Sacramento River and Cottonwood Creek. It consists of various amounts of Columbia fine sandy loam, 0 to 3 percent slopes (CITED ABOVE);

Columbia fine sandy loam, moderately deep, 0 to 3 percent slopes (SEE BELOW), Columbia fine sandy loam, 3 to 8 percent slopes (CITED ABOVE); Columbia loam, 0 to 3 percent slopes (SEE BELOW); Columbia silt loam, 0 to 3 percent slopes (CITED ABOVE); Columbia silt loam, moderately deep, 0 to 3 percent slopes (SEE BELOW); and Columbia silt loam, 3 to 8 percent slopes (CITED ABOVE). In places a gravelly or sandy layer occurs at various depths. All areas are cut by channels of abandoned streams or channels of active streams. Most areas are flooded for short periods during the winter.

Columbia fine sandy loam, moderately deep, 0 to 3 percent slopes (Cn)-This soil has a layer of gravel and sand at a depth of 30 to 40 inches. In some places the gravelly and sandy layer is several feet thick. The areas are near the Sacramento River and are generally subject to overflow during winter when rainfall is high. Most areas are fairly smooth, but a few areas are cut by channels of abandoned streams.

Columbia loam, 0 to 3 percent slopes (Co)-This soil is loam throughout the profile. The available water holding capacity is high. Water moves through the soil at a moderate rate.

Columbia silt loam, moderately deep, 0 to 3 percent slopes (Ct)-This soil is near the Sacramento River, and it is subject to overflow during winters of high rainfall. It has gravelly and sandy layers below a depth of 30 or 40 inches. Some areas are cut by abandoned stream channels. The gravelly and sandy layers of the subsoil reduce the water holding capacity.

CORNING SERIES

General Information

The Corning series are nearly level to gently sloping, well-drained, reddish, gravelly soils that formed in old alluvium. The alluvium was derived from sedimentary and metamorphic rocks of the Coast Range Mountains. The surface soil is yellowish-red gravelly loam, and the subsoil is red gravelly clay.

Corning soils are on high terraces west of the Sacramento River at elevations from 200 to 1,500 feet. A hummocky, or hogwallow, microrelief is characteristic of most areas. The vegetation is annual forbs and grasses.

Most areas of these soils are used for pasture and range or for dry-farmed grain. Because of a claypan in the subsoil, low fertility, and lack of water for irrigation, little intensive farming is done. The soils are medium acid to strongly acid.

Corning-Newville gravelly loams, 3 to 10 percent slopes, eroded (Cx2)-This complex consists of Corning gravelly loam, 3 to 8 percent slopes, and Newville gravelly loam, 3 to 10 percent slopes, eroded. Either soil may occupy from 20 to 80 percent of any one area.

Corning gravelly loam, 3 to 8 percent slopes (CwB)-This soil has an uneven surface because of small drainage ways that cut through

most of the areas. Most of the short drainageways are cut by gullies. Sheet erosion is slight to moderate in most areas.

Newville gravelly loam, 3 to 10 percent slopes, eroded (NrB2)-This soil is less steep but is otherwise similar to Newville gravelly loam, 10 to 30 percent slopes. Runoff is slow to medium and the erosion hazard is slight to moderate.

Corning-Redding gravelly loams, 0 to 5 percent slopes (CyB)-This complex consists of Corning gravelly loam, 3 to 8 percent slopes, and Redding gravelly loam, 0 to 3 percent slopes. Either soil may occupy from 20 to 80 percent of any area.

Corning gravelly loam, 3 to 8 percent slopes (CwB)-(CITED ABOVE, under Corning-Newville gravelly loams)

Redding gravel loam, 0 to 3 percent slopes (RnA)-(SEE BELOW, under this heading)

CORNING SERIES

General Information

The Cortina series consists of nearly level, somewhat excessively drained to excessively drained soils. These soils formed in recent gravelly alluvium derived from sedimentary and metamorphic rocks. The rocks contain many pebbles of chert and quartzite. Cortina soils are brown to yellowish brown throughout. The surface layer is gravelly fine sandy loam, and the subsoil is extremely gravelly sand. These soils are brown or pale brown to yellowish brown in color. The soils range from medium acid in the surface layer to neutral in the subsoil and substratum.

Cortina soils are along most of the streams west of the Sacramento River at elevations of 200 to 500 feet. They are generally on flood plains near active streams, but some of them are in channels of abandoned streams and along ridges. The vegetation is mostly annual grasses and forbs, but includes some hardwoods and shrubs.

Cortina gravelly fine sandy loam (Cz)-Most of this soil is in long narrow strips along stream channels. The surface is generally smooth, but the areas are cut by channels of abandoned streams in places. Drainage is somewhat excessive, runoff is very slow, and permeability is rapid. The soil consists of about 15 to 75 percent of rounded gravel by volume. Included with this soil in mapping are small areas of Arbuckle, Maywood, Orland, and Yolo soils.

Cortina very gravelly fine sandy loam (Czs)-This soil is located for the most part in relatively small areas. It is 50 to 90 percent gravel by volume. Drainage is excessive, runoff is very slow, and permeability is very rapid. The fertility and available water holding capacity are low.

HILLGATE SERIES

General Information

The Hillgate series consists of nearly level, well-drained soils. These soils formed in old alluvium washed from soils developed in material from shale, sandstone, and soft siltstone. The surface soil is light yellowish brown, massive, medium acid and medium textured. It is underlain abruptly by a yellowish brown subsoil that is massive, slightly acid to neutral, and fine textured. These soils are on low terraces, west of the Sacramento River at elevation of less than 1,000 feet. In most areas, pasture crops and row crops are grown. In some areas the vegetation is mostly grass and forbs but includes scattered oaks.

Hillgate loam, 0 to 3 percent slopes (HgA)-This soil is in wide areas on low terraces west of the Sacramento River. The areas vary in size and shape from place to place but are fairly smooth. This soil is well drained. Runoff is slow, and permeability is slow to very slow. Available water holding capacity is low. Movement of water and roots through the soil is restricted by the dense subsoil. There is little or no erosion. Included with this soil in mapping are small areas of Tehama, Arbuckle, and Kimball soils.

Hillgate silt loam, 0 to 3 percent slopes (HI)-Except for the texture of the surface soil, this soil is similar to Hillgate loam, 0 to 3 percent slopes (CITED DIRECTLY ABOVE). In some places water flowing over the surface of the soil almost seals the surface but in others the water considerably reduces the rate at which the soil takes in water.

MAYWOOD SERIES

General Information

The Maywood series consists of nearly level, well-drained soils formed in recent alluvium. The alluvium was derived mainly from softly consolidated sedimentary rocks. Maywood soils are pale brown, medium textured and neutral or slightly acid throughout. They are on flood plains west of the Sacramento River at elevations that range from 200 to 500 feet. Nearly all of the acreage is cultivated.

These soils range from pale brown to light yellowish brown in color. In many places they contain stratified material that ranges from loam to silt loam or fine sandy loam in texture or is gravelly in the lower part. Maywood soils range from slightly acid to neutral.

Maywood fine sandy loam, 0 to 3 percent slopes (Mc)-This soil is mainly fine sandy loam throughout but is otherwise similar to Maywood loam, 0 to 3 percent slopes. Permeability is moderately rapid, and the available water holding capacity is moderate.

Maywood loam, 0 to 3 percent slopes (Me)-This soil is on recent flood plains along fairly short streams west of the Sacramento River. The surface is smooth. Most areas are long and narrow, are less

than 100 acres in size, and generally are parallel to active streams. In some areas there is a layer of gravel at a depth of 4 feet or more.

Maywood fine sandy loam, moderately deep, 0 to 3 percent slopes (Md)-This soil is mainly fine sandy loam to a depth of 20 to 48 inches. Below this depth it is gravelly sand. The gravelly subsoil holds less water and makes the soil somewhat droughty.

Maywood silt loam, 0 to 3 percent slopes (Mh)-This soil has a surface soil of silt loam but is otherwise similar to Maywood loam, 0 to 3 percent slopes (CITED ABOVE, under Maywood fine sandy loam). Most areas are silt loam to a depth of at least 5 feet, but in a few places gravel is at a depth below 4 feet. Water penetrates this soil more slowly than the Maywood loam. The surface tends to seal over if water splashes on it or flows across the surface.

Maywood loam, high terrace, 0 to 3 percent slopes (Mf)-This soil is along many of the shorter streams west of the Sacramento River. Many of the areas are less than 100 acres in size and are long and narrow. Drainage is good. Runoff is very slow, and permeability and fertility are moderate. Included with this soil in mapping are areas of Arbuckle, Hillgate, and Tehama soils.

NACIMIENTO SERIES

General Information

The Nacimiento series are gently sloping to steep, well-drained soils that formed in softly consolidated material chiefly from siltstone. The surface soil is light brownish gray, and the subsoil is light gray. These soils are calcareous silty clay loam throughout. They are on rounded foothills west of the Sacramento River at elevation of 300 to 1,500 feet. Most areas have been cultivated.

The color of the surface layer is generally light brownish gray, but in places it is grayish brown or pale brown. The subsoil is light gray, pale yellow, or nearly white. In areas that are not cultivated, the surface layer is 1 to 2 inches thick and is nearly a dark grayish brown.

Nacimiento-Newville complex, 3 to 10 percent slopes (NhB)-This complex consists of Nacimiento silty clay loam, 3 to 10 percent slopes (SEE BELOW), and Newville gravelly loam, 3 to 10 percent slopes (CITED ABOVE, under Corning-Newville gravelly loams)

NEWVILLE SERIES

General Information

The Newville series are nearly level to very steep, well-drained soils formed from conglomerate and siltstone of the Tehama formation. The soils have a surface soil that is brown to yellowish brown, slightly acid, and gravelly. The subsoil is strong brown to reddish brown gravelly clay that is slightly acid to neutral. These soils are on rounded foothills in the northwestern part of the

county at elevations of 300 to 2,000 feet. The vegetation is mostly annual grasses and forbs but includes some blue oaks. Some areas of these soils are cultivated, but most areas are used for pasture and range.

The surface soil is yellowish brown, pale brown, or brown in color. Its texture is generally gravelly loam but in places it is nearly a gravelly sandy loam or gravelly clay loam. The color of the subsoil is yellowish red, strong brown, or yellowish brown, and the texture is gravelly or slightly gravelly clay loam. The substratum is more yellow than the subsoil. Both the surface soil and the subsoil range from slightly acid to neutral.

Newville gravelly loam, 3 to 10 percent slopes (NrB)-This soil is less steep but is otherwise similar to the Newville gravelly loam, 10 to 30 percent slopes cited directly below. Runoff is slow to medium and the erosion hazard is slight to moderate.

Newville gravelly loam, 10 to 30 percent slopes (NrD)-This soil is on rounded foothills in the western part of the county. These areas vary considerably in size and shape; some areas are more than 500 acres in size. The surface is generally smooth, but many areas have been cut by short drainageways and are undulating. This soil is well drained. Permeability is slow, the available water holding capacity is low, and fertility is moderate to low. Runoff is medium, and the erosion hazard is moderate. In an area 3 to 4 miles north of Fournoy and in another area 9 miles north of Red Bluff, the substratum is partly cemented and is very slowly permeable to roots and water. The clay subsoil, which is at a depth of 10 to 20 inches, is slowly penetrated by roots and water. Included with this soil in mapping are areas of Corning, Altamont, and Dibble soils and some areas that have slopes of less than 10 percent.

Newville gravelly loam, 10 to 30 percent slopes, eroded (NrD2)-This soil is in drainageways in rounded foothills in the western part of the county. The drainageways are cut by gullies that are 1 foot or more in depth. Most areas of this Newville soil are used for pasture and range, but the value of the soil for pasture and range and for dry-farmed grain has been reduced by erosion. Included with this soil in mapping are small areas of Dibble, Altamont, and Corning soils.

Newville gravelly loam, 30 to 50 percent slopes (NrE)-This soil is steeper but is otherwise similar to the Newville gravelly loam, 30 to 50 percent slopes cited above. Runoff is rapid. The hazard of erosion is severe.

PERKINS SERIES

General Information

The Perkins series are nearly level, well-drained soils formed in gravelly alluvium derived from sandstone, shale, and schist. The surface soil is brown, slightly acid gravelly loam, and the subsoil is reddish brown, slightly acid to medium acid gravelly clay loam.

Perkins gravelly loam, 0 to 3 percent slopes (PkA)-This soil is on low terraces west of the Sacramento River. Most areas are less than 500 acres in size and are in long, narrow stringers, the surface of which is smooth. The soil is 10 to 50 percent gravel. This soil is well drained. Permeability is moderately slow, and the available water holding capacity and fertility are moderate. Runoff is slow, and there is no erosion hazard. Included with this soil in mapping are small areas of Arbuckle, Kimball, and Moda soils.

Perkins gravelly loam, 3 to 8 percent slopes (PkB)-This soil is on the edges of terraces. Runoff is slow to medium, and the erosion hazard is slight to moderate.

RED BLUFF SERIES

General Information

The Red Bluff series are nearly level, well-drained soils that formed in old alluvium derived from sandstone shale, and schist of the Coast Range Mountains. The surface soil is reddish-brown, strongly granular gravelly loam, and the subsoil is red, massive, and brittle clay loam. In places in cultivated areas, the soils are strongly acid throughout. Red Bluff soils are on high terraces west of the Sacramento River at elevations of 300 to 1,500 feet. The vegetation is annual grasses and forbs. Most areas are used for pasture and range.

Red Bluff gravelly loam, 0 to 3 percent slopes (Rg)-This soil is on the smooth tops of high terraces west of the Sacramento River. The areas are oval in shape, and some of them are more than 100 acres in size. The soil is 15 to 50 percent gravel. This soil is well drained and permeability is moderately slow. Fertility is low and available water holding capacity is moderate. Runoff is slow, and there is no erosion hazard. Most areas of Red Bluff soil are used for pasture and range. The quality of the forage is poorer in areas that are cleared and cultivated than in areas that still have a moderately dense stand of blue oaks.

Red Bluff gravelly loam, hardpan substratum, 0 to 3 percent slopes (Rh)-This soil usually has a cemented layer at a depth of approximately 40 inches, which results in a perched water table for short periods during the winter months. Water does not penetrate the substratum but drains laterally from the soil. If irrigation water it must be carefully applied to avoid forming a perched water table.

Red Bluff loam, 0 to 3 percent slopes (Rb)-This soil is 5 to 15 percent gravel but is otherwise similar to Red Bluff gravelly loam, 0 to 3 percent slopes. The available water holding capacity is high.

REDDING SERIES

General Information

The Redding series are nearly level to gently sloping soils that formed in old alluvium derived mainly from sedimentary and metamorphic rocks. The surface soil is yellowish red, strongly acid gravelly clay and overlies a yellowish red hardpan. In most areas these soils are shallow over the hardpan and have a hogwallow microrelief. All but a few areas of these soils are on high terraces west of the Sacramento River at elevations from 300 to 1,00 feet. The vegetation is mostly annual grasses and forbs but includes scattered blue oaks. Most areas are used for pasture and rangeland.

Redding gravelly loam, 0 to 3 percent slopes (RnA)-Most of this soil is on the tops of high terraces west of the Sacramento River. A small acreage is east of the within areas of Red Bluff, Los Molinos, and Vina soils. The size of the areas varies, but some areas are more than 500 acres in size. The surface is uneven because of the hogwallow microrelief. The soil is 15 to 50 percent gravel. This soil is well drained. Permeability is very slow, and fertility and available water holding capacity are low. The cemented subsoil is nearly impervious to roots and water, and most of the water therefore drains laterally from the soil. Runoff hazard is slow, and the erosion hazard is slight. Included with this soil in mapping are areas of Corning and Red Bluff Soils.

Redding gravelly loam, 3 to 8 percent slopes (RnB)-This soil is along the edges of terraces or in small drainageways that cut through the terraces. The erosion hazard is moderate.

RIVERWASH

Riverwash (Rr)-consists of channels of intermittent streams and of active streams where the water is high. The areas are made up of deposits of sand and gravel, some of which are mined. Included with Riverwash in mapping are small areas of Cortina, Columbia, Maywood, Molinos, Orland, and Vina soils. Areas of Riverwash have no agricultural value.

TEHAMA SERIES

General Information

The Tehama series are nearly level, well drained soils formed in mixed alluvium, chiefly from sedimentary rock. The surface soil is pale brown, slightly acid loam or silt loam, and the subsoil is brown or yellowish brown, neutral clay loam. These soils are on low terraces, mostly west of the Sacramento River, at elevations of 200 to 1,000 feet. Most areas have been cultivated.

Tehama loam, 0 to 3 percent slopes (TaA)-This soil has a surface soil of loam but is otherwise similar to the Tehama silt loam, 0 to 3 percent slopes, cited directly below. Water infiltrates this soil slightly faster than it does the loam.

Tehama silt loam, 0 to 3 percent slopes (Tc)-Most of this soil is on low terraces west of the Sacramento River, but a small acreage is east of the river in areas near Bend and Red Bluff. The areas vary considerably in size and shape, and some are more than 500 acres in size. The surface is smooth. This soil is well drained. Permeability is slow. The available water holding capacity and fertility are moderate. Runoff is slow, and there is no erosion hazard. Included with this soil in mapping are areas of Arbuckle, Maywood, and Hillgate soils.

Tehama loam, 3 to 8 percent slopes (TaB)-Most areas of this soil are along the edges of terraces. It is more difficult to prepare this soil for irrigation than the nearly level Tehama soils.

Tehama gravelly loam, 0 to 3 percent slopes (Tb)-This soil is comprised of 10 to 20 percent of rounded gravel. The gravel interferes with cultivation and the preparation of a seedbed.

ZAMORA SERIES

General Information

The Zamora series are nearly level, well drained soil formed from fairly recent alluvium derived from sedimentary, metamorphic, and igneous rocks. These soils are on the flood plains along the Sacramento River above the flood stage of the river. Their surface soil is grayish brown and is medium textured to moderately fine textured. The subsoil is dark grayish brown and is moderately fine textured. Zamora soils are deep and typically neutral throughout. Most areas are cultivated.

Zamora loam, 0 to 3 percent slopes (Za)-This soil has a surface soil of loam but is otherwise similar to the Zamora silt loam, 0 to 3 percent slopes cited directly below. Irrigation Water penetrates this soil faster than it does the silt loam.

Zamora silt loam, 0 to 3 percent slopes (Zm)-This soil is west of the Sacramento River along major streams. The areas are parallel to streams, are fairly small, and have a smooth surface. The soil is well drained. Runoff is very slow, and permeability is moderately slow. The available water holding capacity and fertility are high. There is no erosion hazard. Included with this soil in mapping are areas of Columbia and Orland soils.

*text taken directly from USDA, Soil Conservation Service's Soil Survey, Tehama County California, May 1967.

IMPORTANT FARMLAND MAP CLASSIFICATIONS

Adapted from the Advisory Guidelines for the Farmland Mapping and Monitoring Program

The following definitions were taken directly from the Advisory Guidelines for the Farmland Mapping and Monitoring Program, which was prepared by the California Department of Conservation in 1984. The information provided in this document is derived from two major sources; the California Government Code (Section 65570) and USDA Soil Conservation Service Important Farmland Inventory System. There are eight classification types designated on these maps, all eight are found in the Red Bluff Planning Area. The following descriptions, give detailed criteria for each classification type. Please see the glossary for definitions of specific terms.

Prime Farmland (Section 201)-...is land which has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming methods. Prime Farmland must have been used for the production of irrigated crops within the last three years. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use.

In addition, the soil must also meet **all** of the following criteria to be classified Prime Farmland;

a. Water-The soils have xeric, ustic, or aridic (torric), moisture regimes in which the available water capacity is at least 4.0 inches (10 cm) per 40 to 60 inches (1.01 to 1.52 meters) of soil, and a developed irrigation water supply that is dependable and of adequate quality. A dependable water supply is one which is available for the production of the commonly grown crops in 8 out of 10 years; and

b. Soil Temperature Range-The soils have a temperature regime that is frigid, mesic, thermic, or hyperthermic (pergelic and cryic regimes are excluded). These are soils that, at a depth of 20 inches (50.8 cm), have a mean annual temperature higher than 32°F (0°C). In addition, the mean summer temperature at this depth in soils with an O horizon is higher than 47°F (8°C); in soils that have no O horizon, the mean summer temperature is higher than 59°F (15°C); and

c. Acid-Alkali Balance-The soils have a pH between 4.5 and 8.4 in all horizons within a depth of 40 inches (1.01 meter); and

d. Water Table-The soils have no water table or have a water table that is maintained at a sufficient depth during the cropping season to allow cultivated crops common to the area to be grown; and

e. Soil Sodium Content-The soils can be managed so that, in all horizons within a depth of 40 inches (1.01 meter), during part of each year the conductivity of the saturation extract is less than 4 mmhos/cm and the exchangeable sodium percentage is less than 15; and

f. Flooding-Flooding of the soil (uncontrolled runoff from natural precipitation) during the growing season occurs infrequently, taking places less often than once every two years; and

g. Erodibility-The product of K (erodibility factor) x percent of slope is less than 2.0; and

h. Permeability-The soils have a permeability rate of at least 0.06 inches (0.15 cm) per hour in the upper 20 inches (50.8 cm) and the mean annual soil temperature at a depth of 20 inches is less than 59°F (15°C); the permeability rate is not a limiting factor if the mean annual soil temperature is 59°F (15°C) or higher; and

i. Rock Fragment Content-Less than 10 percent of the upper 6 inches (15.24 cm) in these soils consists of rock fragments or coarser than 3 inches (7.62 cm); and

j. Rooting Depth-The soils have a minimum rooting depth of 40 inches (1 meter).

Farmland of Statewide Importance (Section 202)-...is land other than "Prime Farmland" which has a good combination of physical and chemical characteristics for the production of crops. It must have been used for the production of irrigated crops within the last three years. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use.

In addition, the soil must also meet **all** of the following criteria in order to be classified Farmland of Statewide Importance;

a. Water-The soils have xeric, ustic, or aridic torric, moisture regimes in which the available water capacity is at least 3.5 inches (8.89 cm) per 40 to 60 inches (1.01 to 1.52 meters) of soils. They have a developed irrigation supply that is dependable and of adequate quality. A dependable water supply is one which is available for the production of the commonly grown crops in 8 out of 10 years; and

b. Soil Temperature Range-The soils have a temperature regime that is frigid, mesic, thermic or hyperthermic (pergelic and cryic regimes are excluded). These are soils that, at a depth of 20 inches (50.8 cm), have a mean annual temperature higher than 32°F (0°C). In addition, the mean summer temperature at this depth in soils with an O horizon is higher than 47°F (8°C); in soils that have no O horizon, the mean summer temperature is higher than 59°F (15°C); and

c. Acid-Alkali Balance-The soils have a pH between 4.5 and 9.0 in all horizons within a depth of 40 inches (1.01 meter) or in the root zone if the root zone is less than 40 inches deep; and

d. Water Table-The soils have no water table or have a water table that is maintained at a sufficient depth during the cropping season to allow cultivation crops common to the areas to be grown; and

e. Soil Sodium Content-The soils can be managed so that, in all horizons within a depth of 40 inches (1.01 meter), or in the root zone if the root zone is less than 40 inches deep; during part of each year the conductivity of the saturation extract is less than 16 mmhos/cm and the exchangeable sodium percentage is less than 25; and

f. Flooding-Flooding of the soil (uncontrolled runoff from natural precipitation) during the growing season occurs infrequently, taking place less often than once every two years; and

g. Erodibility-The product of K (erodibility factor) x percent f slope is less than 3.0; and

h. Rock Fragment Content-Less than 10 percent of the upper 6 inches (15.24 cm) in these soils consists of rock fragments coarser than 3 inches (7.62 cm).

Unique Farmland (Section 203)---is land which does not meet the criteria for "Prime Farmland" or "Farmland of Statewide Importance", that is currently used for the production of specific high economic value crops. It has the special combination of soil quality, location, growing season and moisture supply needed to produce sustained high quality or high yields of a specific crop when treated and managed according to current farming methods. Examples of such crops may include oranges, olives, avocados, rice, grapes, and cut flowers. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use.

Characteristically Unique Farmland:

a. Is used for specific high value crops; and

b. Has a moisture supply that is adequate for the specific crop; the supply is from stored moisture, precipitation, or a developed irrigation system; and

c. Combines favorable factors of soil quality, growing season, temperature, humidity, air drainage, elevation, exposure, or other conditions, such as nearness to market, that favor growth of a specific food or fiber crop; and

d. Excludes abandoned orchards or vineyards and extremely low yielding crops, as determined in consultation with the County Cooperative Extension Director and Agricultural Commissioner.

High value crops are listed in California Agriculture, the annual report of the California Department of Food and Agriculture. The Department of Conservation maintains a list of current crops which qualify land as Unique Farmland. In order for land to be classified Unique Farmland, the crop grown on the land must have been qualified for the list in the last three years.

Farmland of Local Importance (Section 204)-...is either currently producing crops, or has the capability of production. "Farmland of Local Importance" is land other than "Prime Farmland," "Farmland of Statewide Importance," or "Unique Farmland." This land may be important to the local economy due to its productivity. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use.

"Farmland of Local Importance" was initially identified by a local advisory committee convened in each county by the Soil Conservation Service. Authority to recommend changes to the category of "Farmland of Local Importance" shall rest with the board of supervisors in each county. The Department shall present each draft map to the board of supervisors for their review. After the presentation of a draft map by the Department, the board of supervisors shall have a 60-day review period in which to request any needed modifications. An extension may be granted upon request. The county supervisors may then approve or not approve the "Farmland of Local Importance" category of the map.

Grazing Land (Section 205)-...is defined in Section 65570(b)(2) of the Government Code as:

"...land on which the existing vegetation, whether grown naturally or through management, is suitable for grazing or browsing of livestock."

The minimum mapping unit for "Grazing Land" is 40 acres.

"Grazing Land" does not include land previously designated as "Prime Farmland," "Farmland of Statewide Importance," "Unique Farmland" or "Farmland of Local Importance," and heavily brushed, timbered, excessively steep, or rocky lands which restrict the access and movement of livestock.

Urban and Built-Up Land (Section 206)-...is used for residential, industrial, commercial, construction, institutional, public administrative purposes, railroad yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment plants, water control structures, and other development purposes. Highways, railroads, and other transportation facilities are mapped as a part of Urban and Built-Up Land if they are a part of the surrounding urban areas.

The minimum mapping unit is ten acres. Units of land smaller than ten acres will be incorporated into the surrounding map classifications. The building density for residential use must be at least one structure per 1.5 acres (or approximately 6 structures per 10 acres). "Urban and Built-Up Land" must contain human-made structures or the infrastructure required for development (eg., paved roads, sewers, water, electricity, or in specific circumstances, drainage or flood control facilities) that are specifically designed to serve that land. Parking lots, storage and distribution facilities, and industrial uses such as large packing operations for agricultural produce will generally be mapped as "Urban and Built-Up Land," even though they are associated with agriculture.

"Urban and Built-Up Land" does not include strip mines, borrow pits, gravel pits, farmsteads, ranch headquarters, commercial feedlots, greenhouses, poultry facilities, and road systems for freeway interchanges outside of areas classified as "Urban and Built-Up Land" areas.

Within areas classified as "Urban and Built-Up Land" areas, vacant and nonagricultural land which is surrounded on all sides by urban development and is 40 acres or less in size will be mapped as "Urban and Built-Up Land." Vacant and nonagricultural land larger than 40 acres in size will be mapped as "Other Land."

Other Land (Section 207)---is that land which is not included in any of the other mapping categories. The following types of land are generally included:

- a.** rural development which has a building density of less than one structure per 1.5 acres, but with at least one structure per ten acres;
- b.** marginal agricultural lands;
- c.** brush, timber and other lands not suitable for livestock grazing;
- d.** government lands not available for agricultural use;
- e.** road systems for freeway interchanges outside of "Urban and Built-Up Land" areas;
- f.** vacant and nonagricultural land larger than 40 acres in size and surrounded on all sides by urban development;
- g.** a variety of other rural land uses.

Land Committed to Nonagricultural Use (Section 208)---is land that is permanently committed by local elected officials to nonagricultural development by virtue of decisions which cannot be reversed simply by a majority vote of a city council or county board of supervisors.

County boards of supervisors and city councils will have the final authority to designate lands in this category pursuant to the requirements of this section. The Department will work with city and county planning staffs to obtain this information.

"Land Committed to Nonagricultural Use" will be shown on an overlay to the Important Farmland Series map. The current land use will be indicated on the base map, with the overlay indicating the areas that are "Committed to Nonagricultural Use."

"Land Committed to Nonagricultural Use" must be designated in an adopted, local general plan for future nonagricultural development. The resulting development must meet the requirements of "Urban and Built-Up Land" (Section 206) or "Other Land" (Section 207).

"Land Committed to Nonagricultural Use" must also meet the requirements of either (a) or (b) below;

a. It must have received one of the following final discretionary approvals:

1. Tentative subdivision map (approved per the Subdivision Map Act);
2. Tentative or final parcel map (approved per the Subdivision Map Act);
3. Recorded development agreement (per Section 65864 of the Government Code);
4. Other decisions by a local government which are analogous to items #1-3 above and which exhibit the element of permanence discussed in Section 208. Zoning by itself does not qualify as a permanent commitment.

OR

b. It must be the subject of one of the final fiscal commitments to finance the capital improvements specifically required for future development of the land in question as shown below:

1. Recorded Resolution of Intent to form a district and levy an assessment;
2. Payment of assessment;
3. Sale of bonds;
4. Binding contract, secured by bonds, guaranteeing installation of infrastructure.
5. Other fiscal commitments which are analogous to items #1-4 above and exhibit the element of permanence discussed in Section 208.

APPENDIX M

Soil Candidates for Important Farmland Classification

Prime Farmland Candidates

<u>Symbol</u>	<u>Soil Name</u>
Au	Arbuckle gravelly fine sandy loam, 0 to 3 percent slopes
AvA	Arbuckle gravelly loam, 0 to 3 percent slopes
Aw	Arbuckle gravelly loam, clayey substratum, 0 to 3 percent slopes
Cc	Clear Lake clay
CmA	Columbia fine sandy loam, 0 to 3 percent slopes
CmB	Columbia fine sandy loam, 3 to 8 percent slopes
CsA	Columbia silt loam, 0 to 3 percent slopes
Mc	Maywood fine sandy loam, 0 to 3 percent slopes
Md	Maywood fine sandy loam, moderately deep, 0 to 3 percent slopes
Mf	Maywood loam, high terrace, 0 to 3 percent slopes
Mh	Maywood silt loam, 0 to 3 percent slopes
PkA	Perkins gravelly loam, 0 to 3 percent slopes
PkB	Perkins gravelly loam, 3 to 8 percent slopes
Rb	Red Bluff loam, 0 to 3 percent slopes
Rg	Red Bluff gravelly loam, 0 to 3 percent slopes
Rh	Red Bluff gravelly loam, hardpan substratum, 0 to 3 percent slopes
TaA	Tehama loam, 0 to 3 percent slopes
Tb	Tehama gravelly loam, 0 to 3 percent slopes

Za Zamora loam, 0 to 3 percent slopes

Farmland of Statewide Importance

<u>Symbol</u>	<u>Soil Name</u>
HgA	Hillgate loam, 0 to 3 percent slopes
Hl	Hillgate silt loam, 3 to 8 percent slopes
NrB	Newville gravelly loam, 3 to 10 percent slopes
TaB	Tehama loam, 3 to 8 percent slopes

source: Soil Candidate Listings for Prime Farmland and Farmland of Statewide Importance, Tehama County California Department of Conservation, Farmland Mapping and Monitoring Program, Feb. 2, 1992.

APPENDIX N

Soils Classified as Erosion Hazards

<u>Symbol</u>	<u>Soil Name</u>
CmB	Columbia fine sandy loam, 3 to 8 percent slopes
CsB	Columbia silt loam, 3 to 8 percent slopes
CxB2	Corning-Newville gravelly loams, 3 to 10 percent slopes, eroded
NhB	Nacimiento-Newville complex, 3 to 10 percent slopes
NrD	Newville gravelly loam, 10 to 30 percent slopes
NrB	Newville gravelly loam, 3 to 10 percent slopes
NrD2	Newville gravelly loam, 10 to 30 percent slopes, eroded
NrE	Newville gravelly loam, 30 to 50 percent slopes
PkB	Perkins gravelly loam, 3 to 8 percent slopes
TaB	Tehama loam, 3 to 8 percent slopes

source: Soil Survey, Tehama County USDA Soil Conservation Service,
1967.

APPENDIX O

Air Quality Data (Ozone and PM10)

Ozone (Parts per hundred million)

MONTH	MEAN OF DAILY MAXIMUM (hourly)	HIGHEST VALUE	HIGHEST VALUE DAY (of the month)
JULY	7.3	10	28*
AUGUST	7.1	10	24
SEPTEMBER	7.4	11	19

Particulate Matter (< 10 microns in diameter) (micrograms per cubic meter)

MONTH	MONTHLY MEAN	HIGHEST VALUE	HIGHEST VALUE DAY (of the month)
JULY	33.8	43	29
AUGUST	38.6	55	16
SEPTEMBER	43.4	51	27

* The first of two of more days

NOTE: California Ambient Air Quality Standards:

Ozone = >9 parts per hundred million

PM10 = >50 micrograms per cubic meter

sources: Summary of 1990 Air Quality Data and Air Quality Data Quarterly Report, July, August and September 1991, California Air Resources Board.

APPENDIX P

Emmissions by Facility

FACILITY NAME	TOG	ROG	CO	NOX	SOX	PM
Diamond International Corp.	72	9	1	14	0	37
Packaging Co. of California	2	10	2	16	0	1
Louisiana Pacific Corp.	0	0	0	0	0	18
Fiber Enterprises	3	2	0	0	0	0
Al Bon Company	0	0	0	1	3	7
Crown Plastics	23	17	0	0	0	12

1

units=tons/year

TOG=Total Organic Gases

. ROG=Reactive Organic Gases (includes Ozone)

CO=Carbon Monoxide

NOX=Nitrogen Oxides

SOX=Sulfur Oxides

PM=Particulate Matter

source: Emissions by Facility Summary, 1989 Draft Emissions Inventory
California Air Resources Board

APPENDIX Q

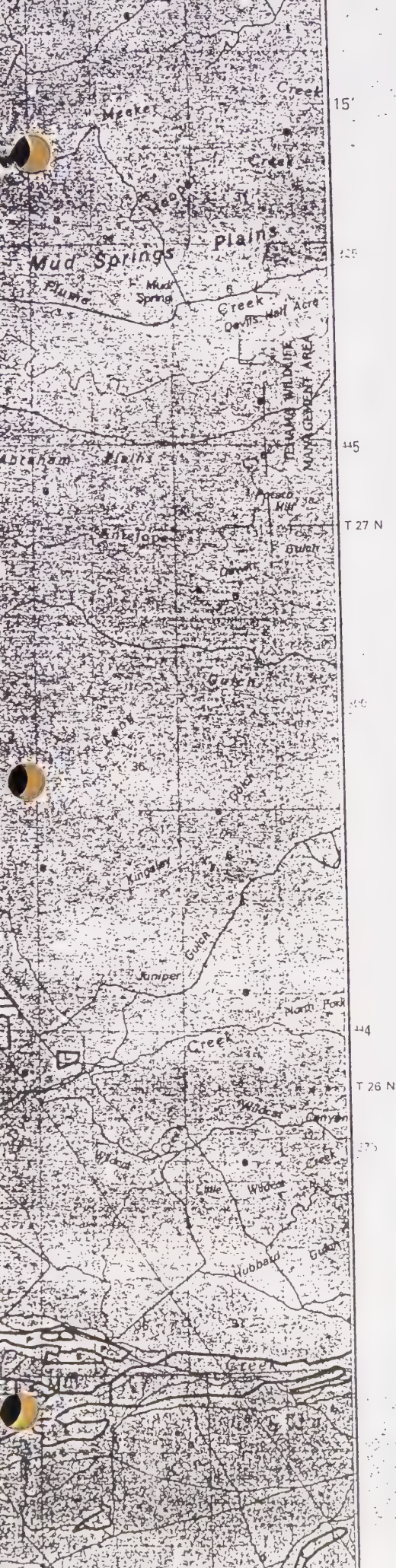
Population and Open Space
Projections

<u>Year</u>	<u>*Projected Population</u>	<u>**Open Space</u>
1992	12,851	6.30
1993	13,213	6.13
1994	13,586	5.96
1995	13,969	5.80
1996	14,363	5.64
1997	14,768	5.48
1998	15,184	5.33
1999	15,612	5.19
2000	16,052	5.05
2001	16,970	4.91
2002	17,449	4.77

* Population projections based on a linear regression model.

** Open Space units is acres/1,000 people

Note: The open space projections are based on 1992 inventory of 81 acres



The following definitions are summarized from the "Advisory Guidelines for the Farmland Mapping and Monitoring Program"



PRIME FARMLAND

Land with the best combination of physical and chemical features for the production of agricultural crops



FARMLAND OF STATEWIDE IMPORTANCE

Land with a good combination of physical and chemical features for the production of agricultural crops



UNIQUE FARMLAND

Land of lesser quality soils used for the production of the State's leading agricultural cash crops



FARMLAND OF LOCAL IMPORTANCE

Land in, or with the potential for agricultural production which does not meet the criteria of any of the above categories



GRAZING LAND

Land on which the existing vegetation is suited to the grazing of livestock



URBAN AND BUILT-UP LAND

Land occupied by structures or infrastructure to accommodate a building density of at least one unit to one and one-half acres, or approximately six structures to ten acres.



OTHER LAND

Land which does not meet the criteria of any other category



RESOLUTION NO. 1-1994 (GPA-22)

GENERAL PLAN AMENDMENT NO. 22
ADOPT 1993 NOISE AND SAFETY ELEMENTS AND
APPROVE RELATED NEGATIVE DECLARATION.

WHEREAS, Government Code beginning with Section 65300, specifies that Cities shall adopt and periodically update their General Plans; and

WHEREAS, the City of Red Bluff Planning Commission has conducted surveys and studies in connection with the updated Noise and Safety Elements of the General Plan of the City; and

WHEREAS, the Planning Commission did, after conducting public meetings and public hearings, recommend to the City Council the adoption of the updated Noise and Safety Elements, and approval of the related Mitigated Negative Declaration; and

WHEREAS, the City Council did hold a public hearing on the updated General Plan Element and the related Negative Declaration;

NOW, THEREFORE BE IT RESOLVED that the City Council does hereby find that:

The Negative Declaration conforms to CEQA and its Guidelines.

None of the conditions listed in (a) - (d) of Section 15065 of the State CEQA Guidelines exist with regards to the updated Housing Element.

The updated General Plan Element conforms to the provision of the Planning, Zoning and Development Law in the California Government Code Title 7 Division 1 beginning with Section 65000;

This project will not individually or cumulatively have an adverse effect on wildlife resources, as defined in Section 711.2 of the Fish and Game Code.

BE IT FURTHER RESOLVED that the City Council does hereby adopt the 1993 Noise Element and the 1993 Safety Elements including Appendix "A" and "B", and excluding Appendix "C" therein and does approve the related Mitigated Negative Declaration.

PASSED, APPROVED AND ADOPTED at a regular ~~adjourned~~ meeting of the City Council of the City of Red Bluff on February 1, 1994, by the following vote:

AYES: Councilmembers: Schoelen, Sale, Robison, Trujillo, and Penne.

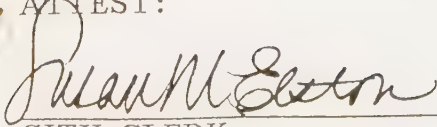
NOES: None.

ABSENT OR NOT VOTING: None.


MAYOR

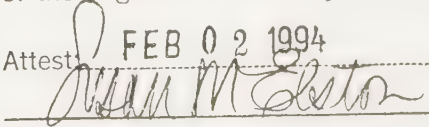
This is to certify that the annexed document is a true and correct copy of the original on file in my office.

ATTEST:


CITY CLERK

Attest:

FEB 02 1994


SUSAN M. ELSTON, City Clerk
City of Red Bluff
County of Tehama, State of California

CITY OF RED BLUFF GENERAL PLAN
NOISE ELEMENT

October 1993

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CITY OF RED BLUFF

NOISE ELEMENT

Authority and Purpose

The purpose of this Noise Element of the Red Bluff General Plan is to help protect the health and welfare of the community by promoting development which is compatible with accepted noise standards.

Section 65302(b) of the California Government Code requires that a Noise Element be prepared as part of all City General Plans. This State law requires that a jurisdiction, through its Noise Element, identify and work toward elimination of noise problems in the community.

The Government Code (Section 65302(g)) specifically requires:

A noise element in quantitative, numerical terms, showing contours of present and projected noise levels associated with all existing and proposed major transportation elements. These include but are not limited to highways and freeways, ground rapid transit systems, and ground facilities associated with all airports.

These noise contours may be expressed in any standard acoustical scale which includes both the magnitude of noise and frequency of its occurrence. The recommended scale is sound level A, as measured with A-weighting network of a standard sound level meter, with corrections added for the time duration per event and the total number of events per 24-hour period.

Noise contours shall be shown in minimum increments of five decibels and shall be continued down to 65 dBA. For regions involving hospitals, rest homes, long-term medical or mental care, or outdoor recreational areas, the contours shall be continued down to 45 dBA.

Conclusions regarding appropriate site or route selection alternatives or noise impact upon compatible land uses shall be included in the general plan.

The state, local, or private agency responsible for the construction or maintenance of such transportation facilities shall provide to the local agency producing the plan, a statement of the present and projected levels of the facility, and any information that was used in the development of such levels.

This Noise Element recognizes the guidelines established by the State Office of Noise Control and the State Department of Health Services and analyzes current and projected noise levels for highways and major city roadways, railroad operations, aircraft, local industrial plants and other ground stationary sources identified by the local government as contributing to the community noise environment.

The noise level contours and tables presented in this element are required to be used as a guide for establishing a pattern of land uses in the Land Use Element that minimizes the exposure of community residents to excessive noise. The noise element is in a sense a supplementary element in that its standards and proposals are to be superimposed upon, or incorporated with those of the other element plans. In addition to required conformance with the Land Use Element, this Noise Element is in conformance to other elements of the City General Plan, particularly the Housing Element, Safety Element, Circulation Element and Open Space/Conservation (Natural Environment) Element.

This element is also in conformance with the County of Tehama General Plan Noise Element and other local and regional planning documents. The standards and goals of this plan element will also have reference value in the assessment of noise impacts upon the environment which may result from proposed public and private development projects.

Present and future noise levels are shown in this document. They are stated in terms of day/night sound level (Ldn). This is the preferred format for implementing the State of California's Noise Insulation Standards. The following section of this element presents an explanation of the concepts of environmental noise and how it is evaluated.

EFFECTS OF NOISE ON PEOPLE

Hearing Loss When sounds are too intense and prolonged, the hearing receptor cells, or "hair cells", can be damaged. The inner ear (cochlea) is a coiled tube about 34 millimeters long, containing about 17,000 hair cells. Hearing loss can occur along all parts of the cochlea. Thus, the degree of hearing loss depends not only on the severity of injury at any one location, but upon the spread of hearing loss in the inner ear. Hearing loss usually occurs above the speaking ranges and spreads downward. Damage can, therefore, be substantial before hearing loss is noticed.

Most experts believe that noise levels of 70 dBA or more contribute to loss of hearing over a lifetime. Clear evidence is available that noises above 80 dBA can contribute to inner ear damage and eventually hearing loss if they are frequently and regularly encountered. Trucks, trains, sports cars, and motorcycles all exceed 80 dBA at 50 feet. Amplified music at close

range may reach 120 dBA. In industry, excessively loud machinery is common.

Speech and Sleep Interference Speech interference begins occurring at about 40-45 dBA and becomes severe at 60 dBA and above. Excessive background noise can reduce the amount and quality of verbal exchange and adversely affect education, family life-styles, occupational efficiency, and the quality of one's relaxation.

To protect a person from sleep interference sound levels should not rise above 35-40 dBA. Whether a person is actively awakened by a particular noise will depend upon noise levels, characteristics of the noise, stage of sleep, the person's motivation to awaken, age, sex, and so on. Elderly people and persons who are ill are particularly susceptible to sleep interference caused by noise.

Stress Inducement Noise as a source of stress is a likely contributor to what many medical authorities believe are stress-related diseases such as ulcers, high blood pressure, heart disease, and arthritis. As a source of stress, noise may also be a contributing factor in mental illness, anxiety, and psychological distress. This distress, in turn, can lead to instability, sexual impotency, headaches, nausea, general anxiety, and changes in general mood.

Performance and Learning Work performance can be adversely affected by noise through distraction and through the physical reactions previously described. While noise does not seem to have an affect on overall work productivity, it can reduce accuracy of work, particularly of complex tasks, and inhibit learning. Even if it does not do this, the price may be increased fatigue, distraction, and irritability on the part of the employee or student. Studies conducted in Europe recommend 55 dBA as an upper limit for peak-interfering noise in classrooms.

Annoyance Many factors affect how annoyed people will be by environmental noise. A first consideration is the characteristics of the noise itself including loudness, duration, steadiness, or whether it contains speech or music. Secondly, background noise levels affect the determination of how intrusive a particular noise is perceived. Thirdly, the time of day and seasonal variations can make a difference. People are most likely to be disturbed at home, at night, and during warm weather.

The number of people disturbed by noise generally goes up as noise levels increase. Predicting annoyance responses to noise in particular situations is difficult. Individuals who complain are generally not unusually physically sensitive to loud sounds. They do tend to have higher incomes and levels of education than those who do not complain. Community wide annoyance responses also depend on leadership within the community and a total sense of community by the population.

Complaints are not, then, a very good criteria to apply in setting protective noise standards. As a result, criteria based on the harmful and disturbing effects of noise on persons have emerged as more objective, measurable, and protective approaches to the problem of setting noise standards.

Measurement and Management of Environmental Noise

Sound travels through the air as waves of minute air pressure fluctuations caused by some types of vibrations. In general, sound waves travel away from the noise source as an expanding spherical surface. The energy contained in a sound wave is consequently spread over an increasing area as it travels away from the source. The result is a decrease in loudness at greater distances from the noise source.

The human ear is subject to a wide range of sound intensities and people hear changes in sound in proportion to those intensities. The **decibel** (dB) scale is a logarithmic scale used to compress this range. The threshold of human hearing corresponds roughly to 0 db. Figure 1 shows the sound levels of typical sources encountered in the environment. The "A" weighting scale, that which most closely resembles human hearing, is used in this plan and is noted by the symbol (**dba**).

Varying noise levels are often described in terms of the equivalent constant decibel level. Equivalent noise levels (**Leq**) are used to develop single-value descriptions of average noise exposure over various periods of time. Such average exposure ratings often include additional weighting factors for annoyance potential because of time of day or other considerations. In this general plan, the time-varying character of environmental noise is described as (**Ldn**). This is a statistical weighting of daytime and nighttime noises and is used as the basis noise impact evaluation and for land use planning criteria.

Ambient noise levels constitute the composite from all sources far and near. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Parameters used when estimating traffic noise relate to the traffic, the roadway and the receiver. Traffic parameters affecting noise are the number and type of vehicles passing a point during a particular time period and the average speed of the vehicles. Roadway variables include its surface, gradient and geometry.

Highway noise increases as the number and average speed of automobiles on it increases. For example, if the automobile traffic volume doubles, the noise level from those autos increases by about 3 dbA. However if the speed decreases to half, the noise level from autos decreases by about 6 dbA. The engine-

Figure 1.

COMMON INDOOR AND OUTDOOR NOISE LEVELS

<u>COMMON OUTDOOR NOISE LEVELS</u>	<u>NOISE LEVEL dB(A)</u>	<u>COMMON INDOOR NOISE LEVELS</u>
	-110-	--- Rock Band
Jet Flyover at 1000 ft. -----	-	
	-100-	
Gas Lawn Mower at 3 ft. -----	-	---- Inside Subway Train (New York)
	-90-	
Diesel Truck at 50 ft. -----	-	---- Food Blender at 3 ft.
	-80-	
Noisy Urban Daytime -----	-	--- Garbage Disposal at 3 ft. Shouting at 3 ft.
	-70-	
Gas Lawn Mower at 100 ft. -----	-	---- Vacuum Cleaner at 10 ft.
	-60-	
Commercial Area -----	-	---- Normal Speech at 3 ft.
	-50-	
Quiet Urban Daytime -----	-	---- Large Business Office
	-40-	
Quiet Urban Nighttime -----	-	--- Small Theatre, Large Conference Room (Background)
	-30-	
Quiet Suburban Nighttime -----	-	---- Library
	-20-	
Quiet Rural Nighttime -----	-	---- Bedroom at Night
	-10-	
	-	---- Concert Hall (Background)
	-	---- Broadcast & Recording Studio
	-	
	-	---- Threshold of Hearing
	-0-	

Source: "Guide on Evaluation and Attenuation of Traffic Noise",
 Author and Publisher: American Association of State Highway and
 Transportation Officials.

NOTE: A ten (10) decibel increase in sound level on dB(A) scale
 doubles the apparent loudness or annoyance of the sound.

exhaust system and tire roadway interaction contribute prominently to overall automobile noise.

Truck noise behaves differently. Noise from tires, exhaust, intake engine and gears all contribute to the total noise environment. An average truck generates A-levels about 15 dbA higher than the average car. The condition of the truck's muffler is particularly important. Another significant difference between the two vehicle sources is that the main noise from autos is from tires, whereas from heavy trucks it is the exhaust stack.

When distance is the only factor considered, sound levels from an isolated noise source will typically decrease by about 6 db for every doubling of distance from the source. When the noise source is essentially a continuous line (e.g., vehicle traffic on a highway), noise levels decrease by about 3 db for every doubling of distance.

Receiver parameters are those which affect the relationship of the receiver's position to the vehicle-roadway noise source. The distance between the observer and the highway is the most significant factor. The greater the distance, the lower the noise level. Doubling the distance from the highway (for example going from 100 to 200 feet) reduces the average traffic noise at the receiver's position by about 4 to 6 dbA.

Railroad noises may also be measured and compared using Ldn levels as a basis for evaluation. Railway noise is produced by the combination of diesel engine noise and railway car noise. Other variables are distance to the receiver, numbers of train operations, speed of trains and numbers of cars per train. Engine air horns and grade crossing warnings are treated as single event noises.

Noise from overhead aircraft around general aviation airports is evaluated based on the number of daytime and nighttime operations for jet and non-jet take-offs and landings. Ldn contours are drawn which include consideration of aircraft altitude and other surrounding noise sources.

Noise levels are mapped using **Noise Exposure Contours**. They are lines drawn about a noise source which indicate constant energy levels of noise exposure. The contours are usually drawn in Ldn levels.

Numerous criteria have been developed over the years for assessing the acceptability of community noise levels, including many more or less complicated procedures for assessing annoyance.

Federal Agency Guidelines

The federal Noise Control Act of 1972 (Public Law 92-574) established a requirement that all federal agencies must administer their programs in a manner that promotes an environment

free from noise that jeopardizes public health or welfare. The U.S. Environmental Protection Agency (EPA) was given the responsibility for providing information to the public regarding identifiable effects of noise on public health and welfare, publishing information on levels of environmental noise that will protect the public health and welfare with an adequate margin of safety, coordinating federal research and activities related to noise control, and establishing federal noise emission standards for selected products distributed in interstate commerce. The federal Noise Control Act also directed that all federal agencies comply with applicable federal, state, interstate, and local noise control regulations.

Although the EPA was given major coordination roles regarding public information and federal agencies, each federal agency retains authority to adopt noise regulations pertaining to agency programs. The EPA, however, can require other federal agencies to justify their noise regulations in terms of the federal Noise Control Act policy requirements. The Occupational Safety and Health Administration retains primary authority for setting workplace noise standards. Because of aviation safety considerations, the Federal Aviation Administration retains primary jurisdiction over aircraft noise standards. These standards apply to evaluation of aircraft noise levels at the Red Bluff municipal airport.

In response to the requirements of the federal Noise Control Act, the EPA has identified indoor and outdoor noise limits to protect public health and welfare (e.g. hearing damage, sleep disturbance, and communication disruption). Ldn values of 55db outdoors and 45 db indoors are identified as desirable to protect against speech interference and sleep disturbance for residential, educational and health care areas. The noise level criterion to protect against hearing damage in commercial and industrial areas is identified as a 24-hour Leq value of 70 db (outdoors and indoors).

The Federal Highway Administration (FHWA) has adopted criteria for determining whether the noise impacts associated with federally funded highway projects are sufficient to justify noise mitigation actions (47 FR 131:29653-29656). The FHWA noise abatement criteria are based on peak-hour Leq noise levels, not Ldn or 24-hour Leq values. The peak 1-hour Leq criteria for residential, educational, and health care facilities are 67 db outdoors and 52 db indoors. The peak 1-hour Leq criterion for commercial and industrial areas is 72 db (outdoors). These criteria would be used if the City of Red Bluff were to participate in federally funded highway projects.

The relationship between peak-hour Leq values and associated Ldn values depends upon the distribution of traffic over the day. A peak-hour Leq value cannot be converted precisely to an Ldn value. However, in areas with heavy traffic, the peak-hour Leq is typically 2 to 4 db lower than the daily Ldn value. In less heavily developed areas, the peak-hour Leq is often equal to the

daily Ldn value. For rural areas with little nighttime traffic, the peak-hour Leq value will often be 3 to 4 db greater than the daily Ldn value. The average difference between the peak-hour and the Ldn level in Red Bluff is about a 2 to 3 db higher peak than Ldn level.

The U.S. Department of Housing and Urban Development has established guidelines for evaluating noise impacts on residential projects seeking financial support under various grant programs (44 FR 135:40860-40866). Sites are generally considered acceptable for residential use if they are exposed to outdoor Ldn values of 65 db or less. Sites are considered "normally unacceptable" if they are exposed to outdoor Ldn values of 65-75 db and completely unacceptable if outdoor Ldn values are above 75 db. These criteria must be considered when the City of Red Bluff evaluates potential sites for federally funded housing projects.

State Guidelines and Local Standards

The California Department of Health Services (DHS) has published guidelines for the preparation of noise elements of local general plans. This city noise element is in compliance with those guidelines. The Guidelines include a noise level/land use compatibility chart, Figure 2, that categorizes various outdoor Ldn ranges into four compatibility categories (normally acceptable, conditionally acceptable, normally unacceptable and clearly unacceptable), depending upon land use. For some land uses, the chart shows overlapping Ldn ranges of two or more computability categories. The City of Red Bluff, by adoption of this element, has adopted these standards for new development.

This Red Bluff General Plan Noise Element identifies the normally acceptable range for low-density residential uses as less than 60 db, while the conditionally acceptable range is 55-70 db. The normally acceptable range for medium and high-density residential uses is identified as Ldn values below 65 db, while the conditionally acceptable range is identified as 60-70 db. For educational and medical facilities, Ldn values below 70 db are considered normally acceptable, while Ldn values of 60-70 db are considered conditionally acceptable. For office and commercial land uses, Ldn values below 70 are considered normally acceptable, while Ldn values of 67.5 to 77.5 are categorized as conditionally acceptable.

The local standard for noise levels near existing airports in Tehama County is 60 dBA Ldn for residential areas or other sensitive receptors. Figure 3 from the Comprehensive Airport Land Use Plan shows detailed Airport/Land Use Noise Compatibility Criteria. A map of airport noise contours from that plan is also included here as Figure 4. Title 21 Section 5012 of the California Public Utilities Code states: "No airport proprietor of a noise problem airport shall operate an airport with a noise impact area based on the standard of 65 dB CNEL unless the operator has applied for or received a variance...". The Red Bluff

Figure 2.

LAND USE COMPATABILITY FOR COMMUNITY NOISE ENVIRONMENTS

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE L _{dn} OR CNEL, dB					
	55	60	65	70	75	80
RESIDENTIAL – LOW DENSITY SINGLE FAMILY, DUPLEX, MOBILE HOMES						
RESIDENTIAL – MULTI. FAMILY						
TRANSIENT LODGING – MOTELS, HOTELS						
SCHOOLS, LIBRARIES, CHURCHES, HOSPITALS, NURSING HOMES						
AUDITORIUMS, CONCERT HALLS, AMPHITHEATRES						
SPORTS ARENA, OUTDOOR SPECTATOR SPORTS						
PLAYGROUNDS, NEIGHBORHOOD PARKS						
GOLF COURSES, RIDING STABLES, WATER RECREATION, CEMETERIES						
OFFICE BUILDINGS, BUSINESS COMMERCIAL AND PROFESSIONAL						
INDUSTRIAL, MANUFACTURING UTILITIES, AGRICULTURE						

INTERPRETATION



NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.



CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.



NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.

CONSIDERATIONS IN DETERMINATION OF NOISE--COMPATIBLE LAND USE

A. NORMALIZED NOISE EXPOSURE INFORMATION DESIRED

Where sufficient data exists, evaluate land use suitability with respect to a "normalized" value of CNEL or L_{dn}.

B. NOISE SOURCE CHARACTERISTICS

The land use-noise compatibility recommendations should be viewed in relation to the specific source of the noise. For example, aircraft and railroad noise is normally made up of higher single noise events than auto traffic but occurs less frequently. Therefore, different sources yielding the same composite noise exposure do not necessarily create the same noise environment. The State Aeronautics Act uses 65 dB CNEL as the criterion which airports must eventually meet to protect existing residential communities from unacceptable exposure to aircraft noise. In order to facilitate the purposes of the Act, one of which is to encourage land uses compatible with the 65 dB CNEL criterion wherever possible, and in order to facilitate the ability of airports to comply with the Act, residential uses located in Com-

munity Noise Exposure Areas greater than 65 dB should be discouraged and considered located within normally unacceptable areas.

C. SUITABLE INTERIOR ENVIRONMENTS

One objective of locating residential units relative to a known noise source is to maintain a suitable interior noise environment at no greater than 45 dB CNEL of L_{dn}. This requirement, coupled with the measured or calculated noise reduction performance of the type of structure under consideration, should govern the minimum acceptable distance to a noise source.

D. ACCEPTABLE OUTDOOR ENVIRONMENTS

Another consideration, which in some communities is an overriding factor, is the desire for an acceptable outdoor noise environment. When this is the case, more restrictive standards for land use compatibility, typically below the maximum considered "normally acceptable" for that land use category, may be appropriate.

Figure 3.

AIRPORT/LAND USE NOISE COMPATIBILITY CRITERIA

LAND USE CATEGORY	CNEL or LDN, DBA <u>1/</u>				
	50-55	55-60	60-65	65-70	70-75
<u>Residential</u>					
single-family detached and duplexes	+	0	-	--	--
multi-family and transient lodging	++	+	0	-	--
mobile homes	+	-	-	--	--
<u>Public</u>					
schools, libraries, hospitals, nursing, homes	+	0	-	-	--
churches, auditoriums, concert halls	+	0	0	-	--
transportation, parking, cemeteries	++	++	++	+	0
<u>Commercial and Industrial</u>					
Offices, retail trade	++	+	0	0	-
Service commercial, wholesale trade, warehousing, light industrial	++	++	+	0	0
General manufacturing, utilities, extractive industry	++	++	++	+	+
<u>Agricultural and Recreational</u>					
Cropland	++	++	++	++	+
Livestock breeding	++	+	0	0	-
Parks, playgrounds, zoos	++	+	+	0	-
Golf courses, riding stables, water recreation	++	++	+	0	0
Outdoor spectator sports	++	+	+	0	-
Amphitheaters	+	0	-	--	--

1/ See Fig. 4 for location of contours.

Figure 3. continued--

LAND USE ACCEPTABILITY

INTERPRETATION/CONDITIONS

++ Clearly Acceptable

The activities associated with the specified land use can be carried out with essentially no interference from the noise exposure.

+ Normally Acceptable

Noise is a factor to be considered in that slight interference with outdoor activities may occur. Conventional construction methods will eliminate most noise intrusions upon indoor activities.

0 Marginally Acceptable

The indicated noise exposure will cause moderate interference with outdoor activities and with indoor activities when windows are open. The land use is acceptable on the conditions that outdoor activities are minimal and construction features which provide sufficient noise attenuation are used (e.g., installation of air conditioning so that windows can be kept closed). Under other circumstances, the land use should be discouraged.

- Normally Unacceptable

Noise will create substantial interference with both outdoor and indoor activities. Noise intrusion upon indoor activities can be mitigated by requiring special noise insulation construction. Land uses which have conventionally constructed structures and/or involve outdoor activities which would be disrupted by noise should generally be avoided.

-- Clearly Unacceptable

Unacceptable noise intrusion upon land use activities will occur. Adequate structural noise insulation is not practical under most circumstances. The indicated land use should be avoided unless strong overriding factors prevail and it should be prohibited if outdoor activities are involved.

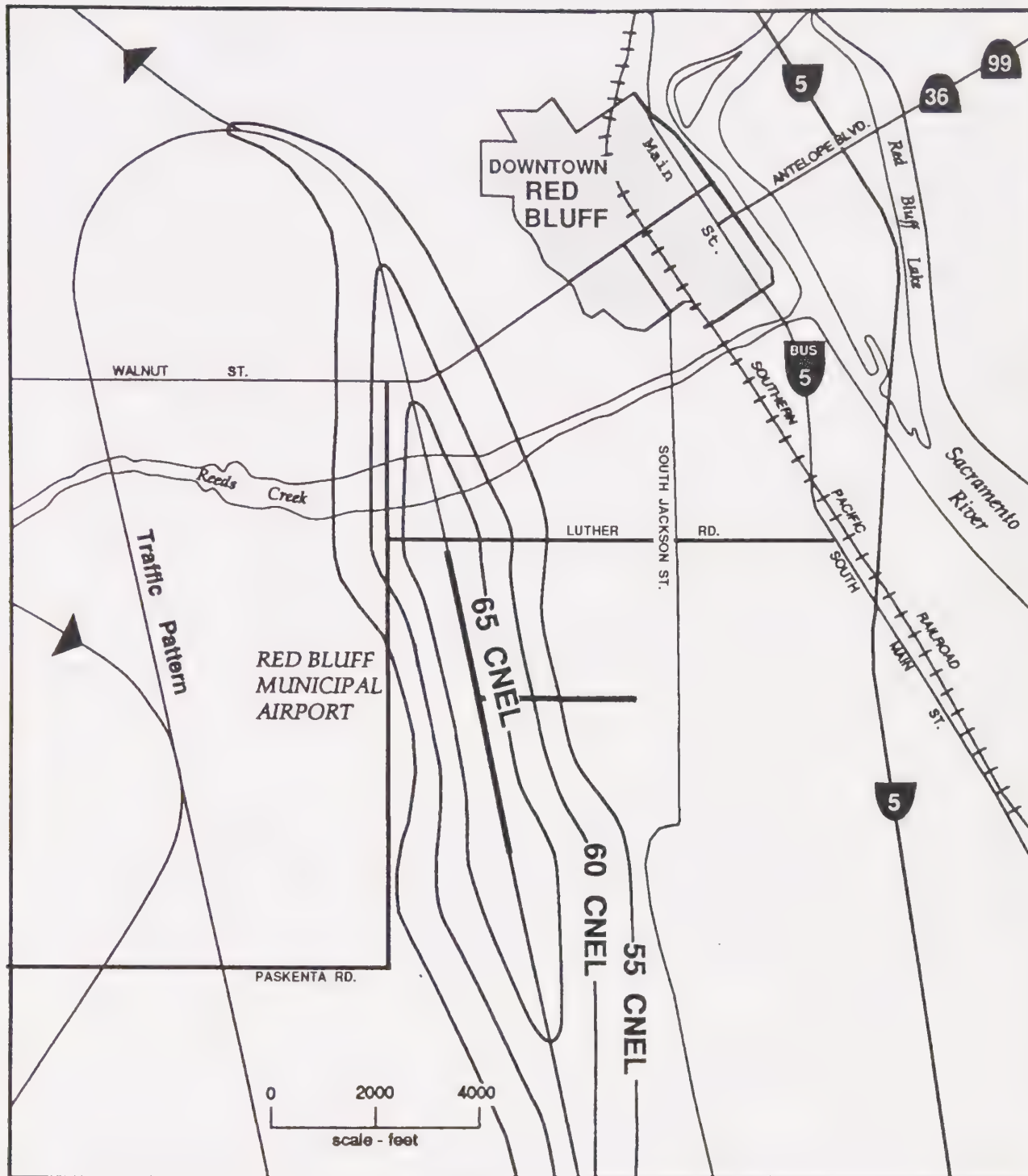


Figure 4. Red Bluff Airport Noise Contours

airport is not in violation of Section 5012 nor will it be in violation within the next fifteen years.

The relative acceptability or unacceptability of particular land uses with respect to the noise levels to which they would be exposed is indicated in the Airport/Land Use Noise Compatibility Criteria matrix. These criteria shall be the principal determinants of whether a proposed land use is compatible with the noise impact from a nearby airport, but special circumstances which would affect the specific proposal's sensitivity (e.g., the extent or lack of outdoor activity) also shall be taken into account.

The California Department of Housing and Community Development has adopted noise insulation performance standards for new hotels, motels, and dwellings other than detached single-family structures (24 Cal. Adm. Code 25-28). These standards require that "interior Ldn with windows closed, attributable to exterior sources, shall not exceed an annual Ldn of 45 db in any habitable room." These standards are required to apply to conditions for issuance of building permits for all such multifamily dwellings in California and all single family units to be located in Red Bluff.

The California Vehicle Code includes limits for noise emissions from motor vehicles. Enforcement of these sections (Figure 5) is done by the California Highway Patrol and local law enforcement agencies.

Noise Issues In Red Bluff

At various times throughout the spring of 1993, noise levels were recorded in several locations in Red Bluff. Both peak hour and 24 hour levels were recorded in 15 minute samples with a 13 Bruel and Kjar (B&K) Model 166 noise classifier which was calibrated before each set of readings was taken. Procedures for taking the sound level samples were those presented in FHWA-DP-45-1R "Sound Procedures for Measuring Highway Noise: Final Report."

The field readings were also used to calculate a computerized noise prediction model using EPA and Federal Highway Administration procedures for noise prediction. U.S. Department of Housing and Urban Development (HUD) Guidelines were used for railroad and aircraft noise prediction. The computer predicted levels approximate the field measurements within 1 to 3 dbA.

Current and predicted noise level contours in Red Bluff are presented in Figures 6, 7, 8 and 9. The 60 db contour lines on the map included in this element (Appendix A) indicate where there may be conditions exceeding of the City noise standards. When compared with the land use map and field observation it may be seen that the following locations are now experiencing or will experience noise problems in the future.

Figure 5.
CALIFORNIA VEHICLE CODE

27160. Motor Vehicle Noise Limits

(a) No person shall sell or offer for sale a new motor vehicle which produces a maximum noise exceeding the following noise limit at a distance of 50 feet from the centerline of travel under test procedures established by the department:

1)	Any motorcycle manufactured before 1970	92 dbA
2)	Any motorcycle, other than a motor-driven cycle, manufactured after 1969, and before 1973	88 dbA
3)	Any motorcycle, other than a motor-driven cycle, manufactured after 1972, and before 1975	86 dbA
4)	Any motorcycle, other than a motor-driven cycle, manufactured after 1974, and before 1978	80 dbA
5)	Any motorcycle, other than a motor-driven cycle, manufactured after 1977, and before 1988	75 dbA
6)	Any motorcycle, other than a motor-driven cycle, manufactured after 1987	70 dbA
7)	Any snowmobile manufactured after 1972	82 dbA
8)	Any motor vehicle with a gross vehicle weight rating of 6,000 pounds or more manufactured after 1972, and before 1975	88 dbA
9)	Any motor vehicle with a gross vehicle weight rating of 6,000 pounds or more manufactured after 1972, and before 1975	86 dbA
10)	Any motor vehicle with a gross vehicle weight rating of 6,000 pounds or more manufactured after 1974, and before 1978	83 dbA
11)	Any motor vehicle with a gross vehicle weight rating of 6,000 pounds or more manufactured after 1977, and before 1988	80 dbA
12)	Any motor vehicle with a gross vehicle weight rating of 6,000 pounds or more manufactured after 1987	70 dbA
13)	Any other motor vehicle manufactured after 1965, and before 1973	86 dbA
14)	Any other motor vehicle manufactured after 1972, and before 1975	84 dbA
15)	Any other motor vehicle manufactured after 1974, and before 1978	80 dbA
16)	Any other motor vehicle manufactured after 1977, and before 1988	75 dbA
17)	Any other motor vehicle manufactured after 1987	70 dbA

(b) Test procedures for compliance with this section shall be established by the department, taking into consideration the test procedures of the Society of Automotive Engineers.

Figure 6
Noise Contours From Major Streets
(Present)

STREETS

Antelope between:

Hwy/36E and Sale Lane

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
6200	.67	4154	100	50

*Sale Lane and Belle Mill

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
18765	.30	5629	120	57

*Belle Mill and Main

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
21344	.30	6403	130	65

Main and S. Jackson

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
7480	.30	2244	65	31

Main between:

Adobe and Walnut

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
8960	.30	2688	71	35

Walnut and Oak

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
10880	.30	3264	85	42

*Oak and Luther

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
15561	.40	6224	130	62

Luther between:

*Main and S. Jackson

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
11910	.40	4764	115	55

Walnut between:

Main and Dumosa

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
9960	.30	2988	80	37

S. Jackson Between:

Oak and Luther

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
7790	.40	3116	85	39

ADT = Average Daily Traffic Adj. = Adjustment
db/ft = Distance between noise source and contour line in feet
* = Intersections with adjustments for trucks

Figure 7
Noise Contours From Major Streets
(Buildout)

STREETS

Antelope between:

Hwy/36E and Sale Lane

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
8040	.67	5386	115	55

*Sale Lane and Belle Mill

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
21178	.30	6353	130	63

*Belle Mill and Main

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
24392	.30	7317	140	68

Main and S. Jackson

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
8470	.30	2622	73	35

Main between:

Adobe and Walnut

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
11200	.30	3360	85	40

Walnut and Oak

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
11560	.30	3468	89	42

*Oak and Luther

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
19441	.40	7776	150	70

Luther between:

*Main and S. Jackson

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
19337	.40	7734	148	69

Walnut between:

Main and Dumosa

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
19010	.30	5703	120	58

S. Jackson Between:

Oak and Luther

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
14160	.40	5664	119	56

*Denotes truck adjustments

Figure 8
Freeway Noise Contours
(Present and Buildout)

Present

South Main Interchange

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
29814	1.4	41739	460	210

Diamond Ave. Interchange

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
30582	1.4	42814	465	220

Antelope Blvd. Interchange

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
33909	1.4	47472	490	248

Buildout

South Main Interchange

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
32795	1.4	45913	485	240

Diamond Ave. Interchange

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
33640	1.4	47096	495	245

Antelope Blvd. Interchange

<u>ADT</u>	<u>Speed/Adj</u>	<u>Adj/ADT</u>	<u>60db/ft</u>	<u>65db/ft</u>
37299	1.4	52218	530	275

Figure 9
Railroad Noise Contours
(Present and Future)

Total average trains per 24 hours: 17.1

Day operations: 59% 7am-7pm = 10.1 trips

Night operations: 41% 7pm-7am = 7.0 trips

Daytime

<u>Volume</u>	<u>Horn/adj</u>	<u>Speed/adj</u>	<u>Vol/adj</u>	<u>60db/ft</u>	<u>65db/ft</u>
10.1	10	.75	75.75	700	340

Nighttime

<u>Volume</u>	<u>Horn/adj</u>	<u>Speed/adj</u>	<u>Vol/adj</u>	<u>60db/ft</u>	<u>65db/ft</u>
7.0	10	.75	52.50	560	270

Note: Contours mapped are the higher (daytime) sound levels

Operations data obtained from Richard McCloskey, Transportation Officer, Southern Pacific Transportation Co.

Areas affected by noise from freeway traffic and lying within the 60 dBA contours include:

All developable areas on Messer Road

The eastern portions of Brearcliffe and Homestead Drives

The easternmost portions of Walton and Wenmark Roads

The area zoned R-Mf adjacent to the west side of the freeway south of the Antelope interchange

The R-L area transected by Adobe Road bounded on the west by Main Street and on the east by I-5

The area east of I-5 south of Grasshopper Creek in the R-L zone

Areas affected by both freeway and railroad noise are the R-L and R-Lf areas east of Montgomery Street and west of South Main Street and any areas considered for development between Hess Road and Interstate-5.

The River Oaks Mobil Home Park west of the I-5 corridor near the downtown area is subject to noise from the highway which has been reported to Caltrans. At the edge of the freeway right-of-way the L10 (peak) noise level is 75 dBA. At vacant spaces 80 feet distant from the edge of the right-of-way the recorded level is 72 dBA. This exceeds the City standard for new construction.

Areas throughout the City affected by railroad operations are:

Montgomery Road, Hinkle Road, James Avenue, Duncan Road, and Thompson Place

The area north of Breckenridge Street, east of a line along Jefferson Avenue and Oriole Drive extending to Highway 36, and east to the railroad

The area between Hess Road and the railroad

South of Oak Street along Madison Street, west of Washington Street to Willow Street on the south and east of the railroad

Part of the noise impact area, the Ingot Estates Subdivision, required a special railroad noise study which indicated that:

Calculations of the day-night noise level (Ldn), using the HUD model, produce values of 79 dB at 100 feet and 76 dB at 150 feet. The 65 dB Ldn line lies 600 feet from the edge of the tracks. The factor with the greatest influence of these

Ldn values is the presence of the grade crossing and the need to use warning horns by trains within one-quarter mile of the crossing.

Areas within the 60 dBA airport noise contour are:

South of Walnut Street, east of Michael Drive, north of Stonybrook Drive and west of David Avenue

North of Walnut, south of Brickyard Creek, east of Baker Road and west of Hook Road zoned R-L and R-Lf.

Homes on Paskenta Road west to Michael Drive, north of Stonybrook Drive and south of Walnut Street

The only sensitive residential area affected by traffic noise from City arterials includes the homes facing South Main Street between Willow Street and Aloha Street.

Other sensitive receptors within the 60 dBA contours are:

Tehama County Library, 645 Madison St. (railroad)

Brentwood Convalescent Hospital, 1795 Walnut Street (Airport)

St. Elizabeth Community Hospital, 2550 Sister Mary Columbia Dr. (freeway)

Antelope School, 22630 Antelope Blvd. (arterial)

Jackson Heights School, 225 Jackson Street (railroad)

Noise from local truck traffic is particularly noticeable on Antelope Blvd., Walnut Street, Luther Road, Main Street and Jackson Street. Again, this is generally within the City standards for nonresidential land uses but noise from diesel engines and refrigerator box motors left on for extended periods of time could cause complaints.

The most frequent noise complaints to the City Police Department is usually from barking dogs or from social events (parties) in residential areas. Both of these situations are more in the form of annoyances best addressed with a noise ordinance rather than with land use regulations.

It is expected that some periodic peak noises from agricultural operations in the area may exceed desired ambient levels. There is no accepted standard for these levels and they are not considered a significant problem in Red Bluff.

The Red Bluff Airport Land Use Plan states: "The 2005 60 CNEL (Ldn) contour is as shown on the Airport Master Plan and affects little territory outside the airport boundary."

Findings

Objectionable noise from transportation facilities and stationary sources can have, and in some areas do have, a significant potential for impact on public health and welfare.

Future development along railroad lines and highways, if allowed, could cause significant noise problems.

Residential development near the airport, if allowed, could cause significant noise problems.

Some land uses in Red Bluff are not currently compatible with existing noise levels and activities.

The Land Use element of the Red Bluff General Plan states: "The expected growth and development in Red Bluff will increase noise levels along principal arterials and collector roadways and will expose people to elevated noise levels along those and the railroad corridors through the community" (p.45).

Goals, Policies and Implementation Measures

Noise Goals

1. Reduce outdoor noise levels in existing residential areas where economically and aesthetically feasible.
2. Ensure that new development conforms to City noise level standards.
3. Locate new noise sensitive land uses away from noise sources unless mitigation measures are included in development plans.
5. Correct or prevent point source noises that have been demonstrated to be annoying to nearby residents.
6. Plan and design new streets or other public facilities to minimize noise in adjacent areas.
7. Follow policies and noise mitigation measures contained in the Airport Land Use Master Plan adopted by the Tehama County Airport Land Use Commission.

Noise Policies

1. Establish buffer areas between sensitive land uses and noise sources.

2. Establish buffers where necessary to ensure that residential, hospital, retirement care and recreational areas are not particularly subject to excessive noise levels.
3. Require noise mitigation measures when new residences are built in proximity to major transportation facilities.
4. Adopt and implement section III D (page 58) of the Red Bluff Land Development Policies in the Land Use Element to set noise buffering standards within the noise corridors.
5. Require environmental impact reports and/or project initial studies to include a thorough noise analysis for residential projects and all other projects involving other sensitive receptors such as schools and health care facilities. All new projects within the noise overlay zones shall also require a project level noise analysis.
6. Encourage and plan for airport development and discourage noise-sensitive activities near the municipal airport.
7. Locate recreational activities that have a potential to cause excessive noise away from noise sensitive land uses.

Noise Programs

1. Adopt and enforce an appropriate noise ordinance.

The City of Red Bluff is considering the adoption of a noise ordinance to regulate noise sources located on private property. The ordinance prohibits the generation of noise levels that increase background 15-minute Leq values by more than 5 dbA on adjoining residential property, or by more than 8 dbA on adjoining commercial or industrial property. The ordinance also prohibits noise sources on public property if background 15-minute Leq values are increased by more than 15 dbA at a distance of 25 feet from the noise source. The ordinance contains several exemptions for alarms and warning devices, daytime construction activities, emergencies, public safety activities, and related situations. The ordinance also provides a permit procedure to authorize exemptions for special events or situations where it is impractical to comply with ordinance provisions.

2. Utilize the noise corridor overlays as designated in the Land Use Element of the Red Bluff General Plan and delineated on Appendix A of this Noise Element.

A noise corridor overlay is proposed to be designated for all residential districts through which freeway, state highway or active railway rights-of-way are present. The corridor overlay shall require, at the discretion of the Planning Commission, a noise buffer between the noise source and occupied structures within the proposed development area. Use of the buffer zone may be required to comply with Title 24 criteria for multifamily dwellings and for the community noise level standards set forth in this General Plan Noise Element. The criteria for the overlay is as follows:

A. Buffer Zone Width

The following distances from the edge of the roadway to the nearest occupied structure, without a noise attenuation barrier at the edge of the right-of-way or at the occupied structure property boundary, may be required: Freeway corridor - 450 feet, Railroad Corridor - 600 feet, State highways and urban arterials - 100 feet. These distances can be greatly reduced with the construction of noise barriers as close to the noise source as possible. These standards reflect worst case predictions of future noise impacts from transportation sources. See Appendix A for a more accurate delineation of noise contours and the requirements of barriers or other mitigations may be modified after analysis by a qualified professional.

B. Barrier Specifications

Noise mitigation barriers should be constructed as specified in item 3 below.

C. Buffer Zone Uses

Vegetation and land contours should be retained whenever possible in the buffer zone. Only accessory structures and fencing are recommended for occupancy of the buffer zones.

D. Density Transfer

Transfers of residential densities to accommodate noise buffer zones may be permitted in accordance with the character of the development site and by means of the approach given in Section III (B) of the Land Development Policies in the Land Use Element.

3. Implement staff and Planning Commission review of potential noise issues in new project location and design features.

By taking advantage of the natural shape and terrain of a site, it is often possible to arrange buildings and other uses in ways that will reduce or eliminate noise impacts. Site planning techniques include increasing the distance between the noise source and the receiver; placing non-noise sensitive land uses such as parking lots, maintenance facilities, and utility areas between the source and the receiver; using non-noise sensitive

structures such as garages to shield noise-sensitive areas; and orienting buildings to shield outdoor spaces from a noise source.

In many cases, noise reduction can be attained by careful layout of noise-sensitive spaces. Bedrooms, for example, should be placed away from busy roadways. Quiet outdoor spaces can be provided next to a noisy highway by creating a U-shaped development that faces away from the highway.

Noise barriers or walls are commonly used to reduce noise levels from ground transportation noise sources. Noise barriers serve a dual purpose in that they can reduce both outdoor and indoor noise levels. To be effective, a noise barrier must be large enough to prevent significant noise transmission through it. It also must be high and long enough to shield the receiver from the noise source. A safe minimum surface weight for a noise barrier is 3.5 pounds per square foot of masonry or similar construction. The barrier must be constructed so that there are no cracks or openings in it. **To be effective, a barrier must intercept the line of noise between the noise source and the receiver.**

An important and often overlooked consideration in the design of noise barriers is the phenomenon of "flanking." This is a term used to describe the manner by which a noise barrier's effectiveness is compromised by noise passing around the end of a barrier. Short barriers, regardless of height, provide little reduction in overall noise level. The effects of flanking can be minimized by blending the wall away from the noise source at the ends of the barrier.

If site planning, architectural layout, noise barriers, or a combination of these measures do not achieve the required noise reduction, walls, roofs, ceilings, doors, windows and other structural features of buildings may need to be modified.

4. Implement staff and Planning Commission analysis of potential noise problems in proposed rezonings and general plan amendments.

Where land use changes are being considered, it is appropriate to evaluate the potential for one land use to conflict with another through direct generation of noise or through generation of traffic which may, in turn, generate additional noise. New or revisions of City zoning and land use map designations should include requirements for distance buffers or constructed barriers between incompatible land uses before the proposed land use change is approved. It should not be the City's policy or procedure to approve land use changes that may create noise problems with the expectation that new development applicants will mitigate those problems.

5. Incorporate the noise mitigations identified in initial studies and EIRs for new projects as conditions for approval. Examples of such mitigations/conditions are:
 - A. Development plans shall include features that will mitigate noise impacts originating from project development that will exceed General Plan Noise Element guidelines.
 - B. Development plans shall include mitigation in the form of shielding or building insulation from off site noises that exceed General Plan Noise Element Standards on site.
 - C. The owner shall retain a Certified Planner, Acoustical Engineer, or other qualified professional to design noise attenuation features for projects that present special acoustical problems.
 - D. Construction activities shall be limited to daylight hours. Construction equipment shall be in good working condition and shall incorporate abatement measures shown in Figure 10 where deemed feasible by City staff.
 - E. Acoustical Screening shall be provided around mechanical equipment in a manner approved by city staff.
6. For properties otherwise approved for development within one half mile of the municipal airport, within the Airport Land Use Planning Area delineated by the Tehama County Airport Land Use Commission and under the Air Traffic Pattern adopted by the City, a grant of aviation easement shall be required.

Such agreements should contain perpetual easement and right-of-way for the unobstructed passage of all aircraft in the airspace above the property and the right to cause in all airspace above the surface of the property such noise or other effects that may be caused by the operation of aircraft landing at, or taking off from, or operating at or on the Red Bluff Municipal Airport.

Figure 10.

Immediate Abatement Potential of Construction Equipment

<u>Type of Equipment</u>		<u>Noise level in dBA at 50 feet</u>			<u>Usage³</u>
		<u>Present</u>	<u>With Feasible Noise Control¹</u>	<u>Important Noise Sources²</u>	
<u>Earthmoving:</u>	Front loader	79	75	E C F I H	0.4
	Backhoes	85	75	E C F I H	0.16
	Dozers	80	75	E C F I H	0.4
	Tractors	80	75	E C F I W	0.4
	Scrapers	88	80	E C F I W	0.4
	Graders	85	75	E C F I W	0.08
	Truck	91	75	E C F I T	0.4
	Paver	89	80	E D F I	0.1
<u>Materials Handling:</u>	Concrete mixer	85	75	E C F W T	0.4
	Concrete pump	82	75	E C H	0.4
	Crane	83	75	E C F I T	0.16
	Derrick	88	75	E C F I T	0.16
<u>Stationary:</u>	Pumps	76	75	E C	1.0
	Generators	78	75	E C	1.0
	Compressors	81	75	E C H I	1.0
<u>Impact:</u>	Pile drivers	101	95	W P E	0.04
	Jack hammers	88	75	P W E C	0.1
	Rock drills	98	80	W E P	0.04
	Pneumatic tools	86	80	P W E C	0.16
<u>Other:</u>	Saws	78	75	W	0.04
	Vibrator	76	75	W E C	0.4

(1) Estimated levels obtainable by selecting quieter procedures or machines and implementing noise control features requiring no major redesign or extreme cost.

(2) In order of importance:

T = power transmission system, gearing	P = pneumatic exhaust
C = engine casing	F = cooling fan
E = engine exhaust	W = tool-work interaction
	I = engine intake

(3) Percentage of time equipment is operating at noisiest mode in most used phase on site.

Source: Bolt, Beranek & Newman, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, EPA, 1971.

References

- California Code of Regulations. State Building Code, Part 2, Title 24, Appendix Chapter 35; Noise Insulation Standards for Multifamily Housing.
- Swing, J.W and Pies, D.B. *Assessment of Noise Environments Around Railroad Operations*, Wyle Research Report No. WCR 73-5, Wyle Laboratories, El Segundo, CA, July 1973.
- Swing, J.W. "Estimation of Community Noise Exposure in Terms of Day-Night Average Level Noise Contours". California Office of Noise Control, Department of Health, Berkeley, CA, 1975.
- Tehama County Airport Land Use Commission, *Comprehensive Airport Land Use Plan: Red Bluff Municipal Airport*, ND.
- U.S. Department of Housing and Urban Development, *The Noise Guidebook*, 1985.
- U.S. Department of Transportation, Federal Highway Administration, "FHWA-RD-77-108 Model to Predict Traffic Noise Along Roadways."
- U.S. Department of Transportation, Federal Highway Administration, National Highway Institute, *Fundamentals and Abatement of Highway Traffic Noise*, 1976.

RESOLUTION NO. 1-1994 (GPA-22)

GENERAL PLAN AMENDMENT NO. 22
ADOPT 1993 NOISE AND SAFETY ELEMENTS AND
APPROVE RELATED NEGATIVE DECLARATION.

WHEREAS, Government Code beginning with Section 65300, specifies that Cities shall adopt and periodically update their General Plans; and

WHEREAS, the City of Red Bluff Planning Commission has conducted surveys and studies in connection with the updated Noise and Safety Elements of the General Plan of the City; and

WHEREAS, the Planning Commission did, after conducting public meetings and public hearings, recommend to the City Council the adoption of the updated Noise and Safety Elements, and approval of the related Mitigated Negative Declaration; and

WHEREAS, the City Council did hold a public hearing on the updated General Plan Element and the related Negative Declaration;

NOW, THEREFORE BE IT RESOLVED that the City Council does hereby find that:

The Negative Declaration conforms to CEQA and its Guidelines.

None of the conditions listed in (a) - (d) of Section 15065 of the State CEQA Guidelines exist with regards to the updated Housing Element.

The updated General Plan Element conforms to the provision of the Planning, Zoning and Development Law in the California Government Code Title 7 Division 1 beginning with Section 65000;

This project will not individually or cumulatively have an adverse effect on wildlife resources, as defined in Section 711.2 of the Fish and Game Code.

BE IT FURTHER RESOLVED that the City Council does hereby adopt the 1993 Noise Element and the 1993 Safety Elements including Appendix "A" and "B", and excluding Appendix "C" therein and does approve the related Mitigated Negative Declaration.

PASSED, APPROVED AND ADOPTED at a regular ~~adjourned~~ meeting of the City Council of the City of Red Bluff on February 1, 1994, by the following vote:

AYES: Councilmembers: Schoelen, Sale, Robison, Trujillo, and Penne.

NOES: None.

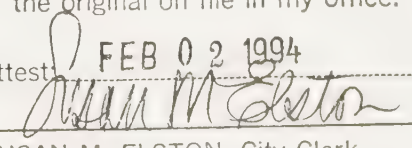
ABSENT OR NOT VOTING: None.


MAYOR

This is to certify that the annexed document is a true and correct copy of the original on file in my office.

ATTEST:


CITY CLERK

Attest: 
FEB 02 1994
SUSAN M. ELSTON, City Clerk
City of Red Bluff
County of Tehama, State of California

CITY OF RED BLUFF
GENERAL PLAN
SAFETY ELEMENT

DECEMBER, 1993

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SAFETY ELEMENT

I. INTRODUCTION

A. PURPOSE OF THE SAFETY ELEMENT

The purpose of the Safety Element is to make the City of Red Bluff aware of any natural or human induced hazards or safety problems so that planning decisions may be influenced by this knowledge, and to encourage adoption of developmental and emergency planning practices designed to reduce loss of life, injuries, property damage, and economic and social dislocation which might otherwise result. The Safety Element is intended to identify risks from major hazards or safety problems in Red Bluff, and to provide an assessment of existing protection services and suggest options the community might pursue in order to improve its level of public safety. In this regard, the Safety Element is the primary vehicle for relating local safety planning to city land use decisions and a city should establish land use planning policies and standards based on the analyses provided within it. The Safety Element is mandated by the State of California in Government Code Section 65302(g):

The general plan shall include a safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence and other geologic hazards known to the legislative body; flooding; and wild land and urban fires. The safety element shall include mapping of known seismic and other geologic hazards.

The Safety Element has been developed to both correlate and be consistent with the other six mandated elements in the Red Bluff General Plan. The general plan purposes, processes, and a detailed description of the planning area and the city sphere-of-influence to be considered are all discussed in the introduction to the Land Use Element.

The concept of public safety expressed in this element is based upon the following assumptions:

1. That natural hazard systems are an unavoidable aspect of life and that not every degree of risk or all hazards can be fully eliminated (e.g., volcanic eruptions)
2. That the impacts of some natural hazards can be increased by human activities (e.g., flooding)
3. That there are human-induced safety problems which can be dealt with in a parallel manner to natural hazards (e.g., hazardous materials)
4. That public policy and action are appropriate in a community to mitigate against hazards which: (a) have a high degree of risk to the general public or (b) have a relatively low risk but which would be considered disasters should the hazardous event occur.

I. B. GOALS, OBJECTIVES, POLICIES AND IMPLEMENTATION
MEASURES FOR PUBLIC SAFETY

1. GOAL: PUBLIC SAFETY

To protect the community of Red Bluff from injury, loss of life, and property damage resulting from natural catastrophes and any hazardous conditions.

2. GOAL: SEISMIC SAFETY

To effectively minimize risks associated with seismic hazards by regulating the design and siting of new development in the City of Red Bluff.

OBJECTIVES AND POLICIES:

- a. Require a review of all potential geological hazards, including seismic hazards, for all new developments in identified hazardous areas.
- b. Avoid placement of critical structures, public facilities, and high-occupancy structures in areas prone to ground failure during an earthquake.
- c. Establish acceptable seismic safety standards so that all new buildings shall be constructed to resist the stresses and ground shaking produced during earthquakes.

IMPLEMENTATION MEASURES

- a. Record information on potential geologic and seismic hazards with parcel or subdivision maps.
- b. Review Building Code requirements to determine the adequacy of standards necessary to protect against all seismic hazards and to assure that the Code is current with the latest technological advances.
- c. Develop programs in cooperation with other public agencies to increase public awareness of seismic hazards and to educate the citizens of Red Bluff on public and private actions that can help to minimize injury and property loss before, during, and after an earthquake.

3. GOAL: GEOLOGICAL HAZARDS SAFETY

New development proposed within areas of potential geological hazards shall not be endangered by, nor contribute to, the hazardous conditions on the site or an adjoining properties.

OBJECTIVES AND POLICIES

- a. Adequate mitigation shall be required on sites with landslide potential, or erodible soils to protect against injury and property damage and to assure a level of development which will not accelerate runoff or degrade water quality.
- b. Replanting of vegetation following development shall be required on all slopes prone to erosion and/or instability. Drought-resistant plant types shall be used for landscaping on post-development slopes where excess watering might induce land slippage or soil erosion.
- c. Discourage clustering of development away from areas considered geologically unstable.
- d. Require protection of exposed soil from erosion during the wet season.
- e. Require topsoil to be stockpiled and reapplied upon completion of grading to promote vegetative regrowth where feasible.
- f. Prohibit earthmoving operations in areas of high soil and slope erosion hazard potential during the wet season unless preauthorized. If such activities are allowed, measures for sediment containment and erosion control must be in place at the conclusion of each day's work.
- g. Require approval of final site development plans, including drainage and erosion control plans, in areas subject to high erosion hazard potential prior to authorization of any initial grading and clearing activities.

IMPLEMENTATION MEASURES

- a. Adopt and enforce a comprehensive Grading and Erosion Control Ordinance, requiring control of existing erosion problems as well as the installation of erosion, sediment, and runoff control measures in new developments.
- b. Adopt regulations relative to zoning and subdivision ordinances which regulate land alterations, road construction or structural development on slopes of 15 % or greater.

4. GOAL: FLOOD HAZARD SAFETY

To protect new and existing structures and surfaces from flood damage in order to minimize the economic impacts and threats to public safety. To prevent adverse impacts on drainage basins and stream channels, and to maintain their beneficial function for runoff, water storage and transport, and the protection of biotic resources.

OBJECTIVES AND POLICIES

- a. Protect the Red Bluff community from risk of flood damage.
- b. Approve only those new development proposals that do not compound or impact the potential for damage from flooding in developed areas or adjacent properties.
- c. Deny any development proposal which would disrupt existing drainage channels in such a manner that total site runoff would be impeded.
- d. Require that any increased runoff from a proposed grading or development site be effectively channeled into existing storm drains and not as overland flow onto adjoining properties.
- e. Ensure that any development plan does not serve to aggravate the flooding potential of the streams that flow through Red Bluff, especially at times of peak flow.
- f. The City shall regulate land uses in flood-prone areas and should allow development only in those areas with appropriate mitigation.
- g. The City should promote community awareness regarding the severity and extent of potential local flooding.

IMPLEMENTATION MEASURES

- a. Utilize the 100-year flood profile for all streams as a basis for evaluating future land use in flood plain areas.
- b. Enact an ordinance regulating siting of new development within the flood plain, and specific regulations for spacing development near stream channels and channel slopes, with at least a 50 foot setback from stream banks.
- c. Develop a flood warning system in order to alert residents in flood prone areas.
- d. Strictly enforce existing City (and County) ordinances preventing building fences, dumping trash or fill, altering vegetation, or construction within the main stream channels.

- e. Construct storm drainage improvements in order to correct identified significant flood prone portions of the urban area.
- f. Maintain culverts and drainage facilities on public roads, and eliminate obstructions from existing drainageways.

5. GOAL: FIRE HAZARD SAFETY

To protect the public from wildland and urban fire hazards and reduce the risks of wildfires and structural conflagrations by mitigating or minimizing use and development in high fire hazard areas, and by maximizing fire prevention measures and citizen awareness of fire hazards.

OBJECTIVES AND POLICIES:

- a. All new development shall be constructed, at a minimum, to the fire safety standards contained in the Uniform Fire and Building Codes.
- b. Require all new developments, including single family dwellings on existing parcels of record, to provide adequate access for fire protection.
- c. Amend City ordinances to include specific road standards developed in conjunction with the Red Bluff Fire Department.
- d. Maintain an average response time of three-four minutes to all areas of the City.
- e. Provide adequate water supplies for fire fighting, especially at times of peak demand.
- f. Discourage new development on the periphery of the urban area where wildfire risks are high due to natural factors.

IMPLEMENTATION MEASURES:

- a. Enforce the existing City ordinance regarding weed abatement on lots and larger properties within city limits.
- b. Adopt an ordinance for the provision of fire-resistant materials and landscaping, and the use of early warning systems such as sprinklers with alarms for all new developments.
- c. To the maximum extent feasible conduct periodic inspections of vacant properties to ensure that dry weeds and other combustible fuels are not permitted to accumulate.
- d. Adopt a policy for providing adequate water supply for fire fighting purposes to all parts of the airport.

- e. Adopt a policy for ensuring a rational system of signing and mapping for City structures, and for detailed mapping of each dwelling in multi-residence structures for aid in location by fire fighting units.
- f. Continue to provide staffing for fire fighting personnel within acceptable guidelines.

6. GOAL: PUBLIC PROTECTION SERVICES

Maintain public safety services (police and fire) at an approved and effective level.

OBJECTIVES AND POLICIES

- a. Levels of service for personnel, equipment, and facilities for police and fire protection services to the greatest possible extent shall be maintained.
- b. A goal of a ratio of two sworn police officers per 1,000 city population shall be regarded as optimum.
- c. Involve fire department input in the planning for fire protection services in areas to the south or north of the City of Red Bluff that may extend the response time of the department beyond acceptable limits.
- d. Incorporate fire and crime prevention measures into development planning to the extent feasible.
- e. Encourage policies that maintain access routes free of traffic obstacles.
- f. The City of Red Bluff shall continue to use the Tehama County Integrated Waste Management Plan and the Hazardous Waste Management Plan when addressing how to handle wastes or materials that pose a threat to human health or the environment by being toxic, reactive, corrosive, or flammable.
- g. Promote continuing training of fire and police department personnel in hazardous materials handling, response, and advanced first aid techniques.

IMPLEMENTATION MEASURES

- a. In order to minimize the dangers of hazardous materials, the City shall require the handling, transport, treatment, disposal, or storage of such materials or waste in a manner that is consistent with Tehama County's Integrated Waste Management Plan and the Hazardous Waste Management Plan.
- b. In concert with all affected public and private agencies, the City shall work to update the existing Emergency Plan and integrate it with the existing "City Disaster Plan" which was devised as the Fire Department's Emergency Operations Plan.

- c. Continue to update the City's integrated emergency disaster response plan. Identify specific facilities and lifelines critical to effective disaster response and evaluate their abilities to survive and operate efficiently immediately after a major disaster.
- d. Continue to integrate local emergency disaster planning with all parallel state and local public protection agencies.

C. ENVIRONMENTAL SETTING

1. GEOLOGY

The City of Red Bluff is located in the northern end of the Sacramento River Valley of California. The city has developed on a relatively level series of terraces on both sides of the Sacramento River at a general elevation of 300-360 feet above sea level. Red Bluff is surrounded by mountains on three sides, with the Coast Ranges roughly 30 miles to the west, the Sierra Nevada about 40 miles to the east, and the Cascade system about 45 miles to the northeast and north. The general topography of the Red bluff area is one of rolling hills which have been dissected locally by stream flowing from the adjacent highlands as tributaries to the Sacramento River.

Geologically the region is considered to be part of the Great Valley province, which is a 400 mile-long by 60 mile-wide sedimentary basin located between the Sierra Nevada and the Coast Ranges. The valley floor and the adjacent hills and riverine terraces are thus composed of sedimentary and volcanic deposits which differ lithologically from the mainly granitic and metamorphic rocks of the Sierra Nevada and the metamorphic rocks of the Coast Ranges.

To the west of the Sacramento River, about 55% of the City of Red Bluff lies atop the Tehama Formation. The Tehama Formation is also the major geologic unit that underlies the drainage systems west of the city. This formation is Upper Pliocene in age and is comprised of non-marine sedimentary rocks. It is semi-consolidated and typically fine-grained, both of which are characteristics which influence the general topography and can act to determine natural rates of erosion. The rocks of the Tehama Formation are characterized as "poorly sorted pale yellow to greenish gray silt, silty clay, locally tuffaceous sand and gravel which weathers to pale buff and yellow-brown color" (U.S. Geological Survey, 1960). The formation also contains scattered lenses of gravel often intermixed with a clay or silt matrix. The soil erodibility and landsliding potential of this formation depends on its composition with silt outcrops being more erodible than sand or clay (DR, 1991). The Tehama Formation generally weathers into rounded hills with moderate relief and a thin soil cover. Along stream courses it is exposed in bluffs from 20 to 60 feet in height.

Roughly 20% of the City of Red Bluff sits on rocks of the Red Bluff Formation. This is a coarse gravelly deposit of non-marine sedimentary rocks which is Pleistocene in age. The Red Bluff

Formation originally formed on a regional gently inclined erosional surface (the Red Bluff pediment) atop the Tehama Formation. It is characterized as "well-rounded boulders and gravel within a tan to brick-red iron-stained matrix of sand and some clay" (USGS, 1960). The Red Bluff formation underlies the city to the south and southwest and also outcrops in the northeast, just south of Dibble Creek. In the City of Red Bluff and in the lower course of Brickyard Creek, the formation is as thick as 30 feet and is very coarse in texture.

The remaining 25% of the City of Red Bluff has been developed on post-Pleistocene (Recent) river and stream channel deposits in and adjacent to the valley of the Sacramento River. This includes all of Red Bluff east of the Sacramento River and the main course of Reeds Creek. These deposits are comprised of sand, gravel, silt, and minor amounts of clay which have been deposited along channels and atop flood plains and natural levees of the major stream. Since these alluvial deposits have been formed by stream erosion primarily of the older Tehama and Red Bluff Formations, their texture is high in gravel, and soils formed on them are generally well-drained, have moderate permeability, and have a high runoff due to a reddish clay substrata. Along the immediate stream courses, alluvial deposits occur as loose unconsolidated sand and gravel in the active stream channel and as sand, silt and clay intermixed with lenses of gravel on the flood plain and levees adjacent to the active channel (DR, 1991).

2. TOPOGRAPHY AND DRAINAGE

The topography of the City of Red Bluff is gently rolling with little general relief except along stream courses. Slopes within the city are generally below ten percent; however, slopes of thirty to seventy percent can occur along stream banks. Slopes atop riverine terraces and in valley floors are generally less than five percent.

The city is crossed from west to east by a sequence of active streams flowing as tributaries to the Sacramento River. From north to south these are Blue Tent Creek, Dibble Creek, Brewery Creek, Brickyard Creek, Reeds Creek, Grasshopper Creek and Red Bank Creek. All of the streams show active alluvial processes which include high discharges the winter-early spring period, and annual deposition of sand, gravel and silt as they join the Sacramento River.

The flooding history of the largest of these streams, Reeds creek, has generated concern on the part of the Department of Water Resources of the State of California which has resulted in two recent studies focusing on this problem (DR, 1987 and 1991). These studies, corroborated by others in similar locales, clearly demonstrate that human activities in the water-shed upstream from Red Bluff play a significant role in sedimentation, peaks of water flow, and erosional capacity streams as they flow downstream across the City of Red Bluff. Since the city lies at the eastern ends of these drainages and has areas of high residential densities and paved streets, runoff from these urban surfaces represent an additional source of water for the channels. At times of peak discharge, this can lead to localized flooding and the

back-up of urban drainage systems. There is a partial levee system along the lower portion of Reeds Creek which helps to protect the adjacent urban area from overbank flooding during periods of high stream flow.

3. SOILS

The description of the soils of Red Bluff are provided in the Open Space and Conservation Elements of this plan. Of special concern in this Safety Element is the degree to which specific soils can be considered to be hazardous in terms of erodibility or accommodation to a hazardous event such as earthquake or flooding. Soil erosion is generally of greatest concern on hillsides and along stream banks where runoff waters reach their highest velocities and can undercut or carry away ground deposits that support structures. Erosion can also pose a hazard where runoff materials deposit their sediments, as along stream confluences with the Sacramento River.

Soils can serve to increase the seismic hazard in an area by undergoing liquefaction during the shaking accompanying an earthquake. Additionally, the high shrink-swell potential of a soil can lead to its classification as an expansive soil which can lead to problems for the siting of structures upon it. The Tehama County General Plan (1974) maps nearly all of the City of Red Bluff as being located on "high expansive soils." This designation is also applied to all surfaces west of the city regardless of geologic formation, altitude, topography, or changes of substrata. While there are locally high deposits of weathered secondary minerals such as clay and also local areas of clay hardpans and substrates, this characterization can only be considered to be too generally for use as a planning guide.

4. CLIMATE

The climate of Red Bluff may be characterized as a subtropical summer-dry (inland Mediterranean) type. This climate has warm to hot summers and mild to cool winters, with a distinctive winter precipitation regime. The long, dry summer period is unique to this climatic type and is a feature shared commonly with most of California. The winter season is characterized by the passage of mid-latitude cyclonic storms (wave cyclones) passing eastward from the Pacific Ocean and bringing moist, unstable air masses into interior Northern California. The actual number of storm centers of low pressure, as well as the strengths of associated cold and warm fronts, is quite different from year to year. This variability is the primary determinant of precipitation quantities from one year to another (Table 1).

Red Bluff receives roughly 21.5 inches of precipitation annually, based on data which has been collected since 1871. The city is located somewhat in the rainshadow of the Coast Ranges and precipitation quantities generally increase to double this amount along the western sides of the Sierra Nevada and three times as much near Sierran summits to the east. There is a wide fluctuation in the annual precipitation at Red Bluff, from an absolute minimum of 7.20 inches in

TABLE 1
ANNUAL PRECIPITATION TOTALS FOR RED
BLUFF, 1969-1991

<u>YEAR</u>	<u>PRECIP.</u>	<u>YEAR</u>	<u>PRECIP.</u>
1960	25.63	1976	7.20
1961	18.95	1977	19.29
1962	21.11	1978	31.72
1963	22.46	1979	29.23
1964	17.08	1980	20.43
1965	19.67	1981	30.99
1966	20.04	1982	25.72
1967	19.11	1983	48.98
1968	24.10	1984	15.61
1968	26.93	1985	14.00
1970	29.29	1986	NA
1971	13.10	1987	NA
1972	17.23	1988	19.30
1973	31.67	1989	21.20
1974	20.62	1990	24.76
1975	19.65	1991	25.57

The wettest two seasons (consecutive), normal 42.98

77.22 in 1940 - 1942

74.70 in 1981 - 1983

74.39 in 1877 - 1879

The wettest three seasons (consecutive), normal 64.47

106.77 in 1939 - 1942

105.69 in 1980 - 1983

104.65 in 1877 - 1880

1976 to an absolute maximum of 48.98 inches in 1983. Lengthy periods of wet years are rare, with the wettest two consecutive seasons providing about 70-80% greater than normal, and the wettest three consecutive seasons providing about 64% greater than normal (Table 1). Snowfall is infrequent and usually very light in amount when it does occur. Precipitation during the late spring and summer months is confined to occasional convectional thundershower activity and is likewise quite light in amount.

Winter months are dominated by the passage of storms and by general cooling. Cooler air tends to settle into the northern Sacramento Valley from adjacent mountainous areas, where radiational cooling during relatively calm, clear winter nights can lead to low temperatures. Winter temperatures range from a monthly normal of 45.5 F for January to about 54 F for March and November. Absolute minimum of 20 F have been recorded for both December and January. The rainiest months are between November and March, with 79% of the annual total being received during those five months. This concentration is significant in terms of stream regimes and peak periods of runoff leading to a potential flooding hazard in wet years.

The summer months are usually quite dry with only about 1.52 inches, 7% of the annual total, arriving in the five month period of May-September. By mid-summer the Sacramento Valley is usually occupied by an elongated thermal low pressure due to intense heating of the land surface. The retreat northward of the winter storm tracks is accompanied by the domination of Northern California by massive atmospheric subsidence from the eastern margins of the north pacific subtropical high pressure system. Warm, dry sinking air masses now dominate the Sacramento Valley and its foothills bringing clear skies and maximum sunshine exposure. Winter percentages of possible sunshine ranged from 52% in December to 69% in March. Summer percentages of possible sunshine range from 85% in May to 94-96% in July and August--leading to an annual figure of 79% (Table 2). Average summer temperatures range from 71.6 F in April to 98 F and 95.7 F in July and August. Record high temperatures of 119 F for July and 121 F for August have been recorded, and long periods of daily temperatures above 90 F are noted (27 for July and 25 for August). Relative humidities during the mid to late summer are also quite low, ranging between 19-23% (late afternoon) for the June-September period.

The summer patterns of rainfall, sunshine, temperature, and relative humidity are crucial in explaining the seasonality of the wildland fire hazard in the Red Bluff region.

Prevailing winds are up the valley from the southeast and down the valley from the northwest. Highest wind speeds are usually southerly in association with frontal activity, frequently reaching 50-60 miles per hour (and occasionally greater) with the strongest fronts (Lingenfelter, 1970). Northerly winds reach speeds of 30-40 mph and only rarely exceed 50 mph. These winds occur mainly in the fall-winter-spring months. Persistent radiation and evaporation fogs occur during

TABLE 2

Month	Average Monthly Temperature (F)	Normal Daily Maximum Temperature	Average Monthly Precipitation (in)	Percentage of Possible Sunshine
January	45.5	53.6	4.50 (10.17)	54
February	49.7	59.5	3.31 (11.38)	63
March	54.1	63.8	2.39 (9.21)	69
April	60.4	71.6	1.51 (5.79)	80
May	68.3	80.6	0.77 (4.04)	85
June	76.2	89.3	0.43 (1.63)	89
July	83.8	98.0	0.06 (0.69)	96
August	81.0	95.7	0.21 (1.56)	94
September	76.0	90.6	0.46 (2.47)	92
October	65.6	78.3	1.16 (4.30)	81
November	54.5	64.0	3.10 (8.42)	61
December	47.1	54.7	3.59 (10.29)	52
<u>Annual</u>	62.6		21.49	79

Source: U.S. Weather Service (1983)

winter months under the influence of a stagnant high pressure system, and particularly if there are calm conditions and if the ground is saturated from recent rains. Wind scour acts to relieve foggy conditions; however, it is noted that the number of foggy days per year is increasing due to human air pollution. Like snowfall, fog and high wind are not important climatic hazardous variables on a long-term basis at Red Bluff.

II. POTENTIAL NATURAL HAZARDS

A. SEISMIC HAZARDS

1. FAULTING AND EARTHQUAKES

All aspects of seismic safety are regarded as critically important aspects of any general plan Safety Element in California. The primary seismic hazard is earthquake activity which originates as shock waves generated by faulting -- movement as rocks are displaced along an active fault. The primary associated seismic hazards are ground shaking and the potential for ground rupture along the surface traces of the fault line. Secondary seismic hazards result from the interaction of ground shaking with existing bedrock and soil conditions and include liquefaction, ground subsidence and landslides. Water bodies affected by earthquake shock waves may demonstrate tsunamis along seacoasts and seiches in enclosed water bodies.

The devastating San Fernando earthquake of February, 1971 heavily influenced the California legislature to codify the approach to planning for the earthquake hazard. The Alquist-Priolo Special Studies Zones Act was signed into law in December, 1972 and went into effect on March 7, 1973. The purpose of this Act is to prohibit the location of most structures for human occupancy across the traces of active faults and to mitigate thereby the hazard of fault-rupture (earthquake shaking) (Section 2621.5). Under the Act, the State Geologist (Chief of the Division of Mines and Geology) is required to delineate "Special Studies Zones" along known active faults in California. Cities and counties affected will be provided with Official Maps of these faults in order to regulate certain development projects within these zones. They must withhold development permits for sites within the special studies zones until detailed geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting (CDC, 1990 revision). The mapping of Special Studies Zones began in 1973 with attention to the most important known surface faults in California (e.g., the San Andreas, Calaveras, Hayward, and San Jacinto faults). As of January, 1990, 488 Official Maps of Special Studies Zones have been issued, and nearly 25% of these have been re-studied and revised.

The most recent listing of cities and counties affected by the Alquist-Priolo Act does not include either the City of Red Bluff or Tehama County. The closest surface fault to Red Bluff is the Elder Creek Fault which lies 21 miles to the southwest. The nearest recently active surface fault is the Cleveland Hill Fault, a relatively short fault in

southeastern Butte County about 66 miles from Red Bluff. An earthquake on this fault occurred on August 1, 1975 and had a magnitude of 5.7 on the Richter Scale. Studies relating to the earthquake hazard in the northern Sacramento River Valley and adjacent northeastern California generally support the following conclusions:

- (a) Of known earthquakes in this region, 90% were of intensity V or less on the Mercalli Scale.
- (b) There have been no human injuries or deaths and only very limited property damage from earthquakes within this region.
- (c) There is no evidence of an earthquake greater than magnitude 6.5 having occurred in the region in historic times.
- (d) Since a hypothetical intensity VIII earthquake might occur anywhere in interior Northeastern California (a large earthquake), planning within this region should be based upon this event as a maximum intensity. And,
- (e) The earthquake hazard in this region is not great when compared with the rest of the State, nor is it great when compared with other natural hazard systems in the same regions (Guyton and Scheel, 1974).

Based on present geologic knowledge of the City of Red Bluff and adjacent portions of Tehama County, there is little likelihood of a Special Studies Zone being mapped based on an "active fault", which is one which has had surface displacement during the last 11,000 years (the Holocene). There is also no evidence of a "potentially active fault," which is defined as one which has shown evidence of surface displacement during the last 1.6 million years (the Pleistocene Epoch). The only mapped fault system in Red Bluff has been named the Red Bluff Fault. The Red Bluff Fault is a "subsurface feature that extends northeast and southwest from Red Bluff" as mapped by Harwood and Helley (USGS, 1987). The evidence for this fault is based upon proprietary subsurface data; however, they report that "there are no surface features that can be associated unequivocally with the fault even though there may be as much as 450 feet of subsurface vertical offset, south side down (DWR, 1991, p. 17).

The objectives and policies listed previously reflect the somewhat anomalous position of planning the earthquake hazard for the City of Red Bluff. It is clear that the broader statewide dimensions of planning for the seismic hazard incline toward carefulness; however, a tendency to heavily discount this hazard based upon the historically low profile of damaging activity might occur. The policies as listed reflect a middle course of action which would recommend a consideration of potential geological hazards for all proposed developments, yet require detailed geological investigations only for those areas with known geological problems. Major projects where considerable public risk is apparent, as in the case of the siting of municipal facilities or critical structures such

as hospitals, should be required to submit carefully documented geological and engineering reports which should consider the local seismic risk along with all other related non-seismic geological hazards.

2. OTHER SEISMIC HAZARDS

a. Ground Shaking

Several factors influence the amount of ground shaking at any locality. The principal ones are the distance from the epicenter of the fault movement, and the local bedrock-soil conditions. Bedrock areas will have a different shaking impact compared with areas underlain with softer, less consolidated materials. The stream valleys which are veneered with alluvium would thus be more likely to be affected by ground shaking, as would any areas with sand and mud.

b. Liquefaction

Wherever there is poorly consolidated material (such as sand and silt) and a shallow depth to groundwater, there is a potential for the soil to liquify during ground shaking. Only strong earthquakes provide sufficient intensity of shaking to cause liquefaction, but if one does, the soil can act as a fluid. Structures can tilt or sink, highway overcrossings, levees, and bridge abutments can fail, and lateral ground movement can occur on slopes as low as 3%. Areas of Red Bluff most susceptible to such potential activity would be the beds of stream courses and riverbank exposures such as bluffs. Site investigations and testing would have to be conducted in order to determine the potential for soil liquefaction as well as the potential for other seismic impacts.

c. Landslides

Slope failure due to mass movement processes under the influence of gravity can occur with or without an earthquake. These include debris slides, earth flows, slump blocks, mud flows, and rock avalanches. The major factors creating this hazard are: slope steepness, parent materials, water content in the materials involved, and human-caused alternations. These alterations may take the form of: over-steepening of slopes by excavation, cutting and filling along the bedding plane, removal of materials at the base of a slope, placing fills or structures on potentially unstable slopes, adding irrigation water to slope or terrace surfaces, and vegetation removal leading to accelerated erosion. Some potentially unstable slopes can be stabilized or developed in such a manner as to minimize landsliding. Site investigations, careful planning in areas of steeper slopes, and mitigation designs are needed. If investigation indicates a limit to the mitigating measures, the landslide potential may constrain the ultimate human use of the site. This may be the situation along the banks of major streams such as the Sacramento River, Reeds Creek and

Brickyard Creek. Aerial photographic surveys reveal that large scale landslides are rare in the 75 square miles of the Reeds Creek drainage basin; however, several large earthflows occur outside the city limits along the north side of Brickyard Creek (DWR, 1991).

d. Tsunami

A tsunami is a seismic sea wave generated by earthquakes on ocean floors which serve to generate long ocean waves. These waves cause high water damage when they ultimately strike a seacoast. Because of its inland location, the City of Red Bluff is not susceptible to such a hazard.

e. Seiche

Seiche is the periodic oscillation of a landlocked body of water such as a lake or reservoir, usually caused by seismic activity. The lack of such aquatic features in the Red bluff area renders the city not subject to this hazard.

B. NON-SEISMIC GEOLOGIC HAZARDS

1. EROSION

Erosion of topsoil is generally of greatest concern on hillsides and along terrace sides and stream banks where runoff reaches its highest velocity. This can serve to undermine structures by carrying away supporting ground materials. Deposition of eroded materials can also create a hazard when debris is deposited at the base of a slope or where streams reach a confluence, thus impeding drainage. Erosion can be prevented or minimized by proper siting of development projects away from steep slopes and back from stream banks. Other mitigations include: minimizing landform alteration, limiting vegetation removal, recontouring to allow for proper runoff and soil drainage, and revegetating or covering graded areas to slow runoff velocity and encourage slope stability.

2. VOLCANIC HAZARD

The City of Red Bluff is located 45 miles from Mount Lassen, the 10,452 foot high mountain which was the most recent large-scale volcanic eruption in California. The volcano erupted sporadically between 1914 and 1921 and in its eruptions of June 14, 1914 and May 19, 1915 produced vertical clouds of vapor and ashes to a height of over five miles in the atmosphere. These clouds were witnessed from Red Bluff which was not affected by debris fallout due to the lack of high winds and the distance involved. Additional recent volcanic activity occurs near Paynes Creek, 21 miles to the northeast of Red bluff. Tectonically, Red Bluff is situated on as much as 2,000 feet of sedimentary materials in the Great Valley structural trough, which is more a product of ancient plate tectonic movement than the volcanic

eruptions which characterize the Cascades geologic province. The threat of a volcanic eruption within the Red Bluff area is thus minimal.

C. FLOOD HAZARDS

1. TYPES OF FLOOD HAZARDS

Flood hazards fall within three basic categories: natural seasonal flooding, dam inundation, and mud and debris flows. Natural flooding results from seasonal rainstorms that cause streams to overflow their banks, and the degree of local flooding can be aggravated by inadequacies in local storm drain facilities. Dam inundation occurs in association with structural failure of a nearby water impoundment. Mud and debris flows originate in hilly areas having sediment deposits that are poorly drained. These would mainly occur in upland areas some distance to the west of the City of Red bluff.

Red Bluff would be affected by a structural failure of Shasta Dam, 42 miles to the north. Both this dam, and the smaller Keswick Dam to the south, are major impoundments of drainage waters of the Sacramento river and its northern tributaries. Lake Shasta has a holding capacity of 4.5 million acre feet of water and Keswick Reservoir has a capacity of 0.02 million acre feet. A failure of Shasta Dam would release considerable floodwaters into the main channel of the Sacramento River, and, depending on the quantity released, the timing of the flooding, the amount under storage, the season of the year, and pre-existing hydrological conditions along the Sacramento River and its tributaries between Redding and Red bluff, the consequences could be catastrophic.

The major natural hazard system affecting the City of Red Bluff is natural seasonal flooding. The construction of Shasta Dam was part of the Central Valley Project, a scheme which involves a system of twenty dams and reservoirs, as well as canals, power plants, and other facilities. The Red bluff Diversion Dam, which diverts water from the Sacramento River into the Tehama-Colusa Canal, and affects the impoundment of water into "Lake Red Bluff," is a part of this project. Shasta Dam was intended by the U.S. Bureau of Reclamation to be a major flood control storage facility, thus lessening the threat of natural winter-spring flooding to communities downstream, such as Red Bluff.

The flooding hazard of the City of Red Bluff, while not severe overall, is today most notable along the lower courses of the main streams that flow from the eastern foothills of the Coast Range through Red bluff to their confluences with the Sacramento River. These streams are: Red Bank, Grasshopper, Reeds, Brickyard, Brewery, Dibble, and Blue Tent Creeks. Overbank runoff from these streams pose the greatest threat of urban flooding. Thus, the hydrological profiles of these drainage systems are of concern in floodplain planning in the City of Red Bluff. The drainage carried by these tributary streams are largely a function of the amount and season of rainfall, the basin drainage area, and channel characteristics.

The most recent flooding events in the City occurred during January, March, and December, 1983 when Reeds Creek overflowed its banks along the lower mile of its course through Red Bluff. These flood events flooded 65 homes and involved considerable emergency efforts by local agencies. Floodwaters were estimated to be between 3-4 feet deep inside homes in the affected areas. As part of the public outcry for remediation, a number of studies have been made of the Reeds Creek drainage basin, and the flooding potential of the stream by the Department of Water Resources. These studies have examined both the natural factors and the human factors of the flood hazard along this stream, and these conclusions may be extrapolated to the other streams flowing through Red Bluff.

2. FACTORS AFFECTING THE FLOOD HAZARD

The natural climatic pattern of the region plays a role in stream flooding. It is significant to note that 1983 was the wettest year on record (48.98 inches). It is also notable that heavy rainfall during November-December, 1982 and November-December, 1983 acted to swell the runoff into Reeds Creek. The monthly totals in the early to mid-winter period may be more important indicators of flooding potential than annual totals, since the flooding of 1964 occurred with only 17.08 inches of total precipitation, but 9.31 inches occurred in November-December alone.

The human factors that have affected the watersheds of streams like Reeds Creek are: the operation of the Red Bluff Diversion Dam which has caused short-term changes in the stream erosion-deposition cycle (especially siltation in the stream channel downstream); clearing of oak trees and soil compaction by grazing animals, which have caused increased runoff and peak flows; placing of obstructions (bridges and pipelines) in stream channels; human occupation of floodplains, and the spread of impermeable urban surfaces such as streets which can increase the velocity of surface runoff into stream channels.

The streams which flow through Red Bluff drain significant watershed to the west of the City. Reeds Creek has a drainage basin of 74.4 square miles, Red Bank Creek occupies 89.6 square miles, and the aggregate of these and the other five stream drainage basins is 246.5 square miles. It is clear that long-term land management decisions in these basins, especially with regard to forest clearance and streamside alterations is of concern to the residents of Red Bluff.

3. PLANNING FOR FLOOD HAZARDS

In floodplain planning, the 100-year floodplain can be mapped. This is the area which is estimated to have a 1% chance per year of inundation. It must be considered that this is only a statistical probability. Also mappable, given detailed data, are 50-year, 20-year, 10-year, and 5-year floodplains. The 100-year (recurrence interval) of floodwaters from Red Bank Creek has a magnitude of 21,000 cfs., while the 10-year magnitude is 12,000 cfs. These data would allow proper planning of drainageways during times of peak flow. The 100-year

floodplain has been set by FEMA as the "base flood" standard for acceptable risk. The National Flood Insurance Program (FEMA) has studied the floodways of Red bluff and has prepared maps of the 100-year (and 500-year) floodplains for all streams flowing through Red Bluff.

These 100-year floodplain boundaries are accurately drawn on the land use map in this General Plan. This is the floodplain which is considered in the proposals in both the Safety and Land Use Elements. This is the critical zone for planning with regard to human occupancy and land use along stream courses.

At the present time Red Bluff relies on the natural drainage channels for its surface runoff. A study conducted in 1962 resulted in the identification of potential flood hazard areas, and drainage facilities were constructed by the City to relieve these. However, some "missing flood control improvements" are yet to be constructed primarily because the financial sponsorship is lacking and the infill nature of urbanization in Red Bluff has allowed some development to avoid mitigation of drainage impacts from their isolated projects (Bryon and Associate, 1991). The City Master Plan study for infrastructure systems (Bryon and Associates, 1991) identifies local flood hazard areas and suggests remedies. Similar recommendations were made by the Department of Water Resources in the 1987 study of the Reeds Creek flood of 1983. The main areas affected are:

- (1) Most homes on Musick Avenue and along Aloha Street from S. Jackson Street to Aloha Court are located on the 100-year floodplain.
- (2) Vista School at Vista Way and S. Jackson would suffer from drainage problems.
- (3) An area east of Airport Blvd. and north of Kimball Road would suffer from runoff backup.
- (4) A potential exists for some inundation of Forward Park.
- (5) The vicinity of the Southern Pacific right-of-way between Walnut Street and Reeds Creek has a high potential for future flooding with continued development.

The 1991 infrastructure plan concludes:

"Red Bluff relies for runoff primarily on the natural drainage courses which bisect its sphere of influence. Current design philosophy permits overland flow in street gutters as a means of balancing flood protection needs with local financial resources. However, as development approaches buildout in the core area, it may be desirable to convey the peak runoff quantity from a 100 year storm event (design capacity) to the

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receiving stream in some type of physical facility, e.g., storm drain pipes, concrete-lined channels, detention basins, etc."

Limiting land uses in the floodplain to those that can sustain periodic flooding will have the greatest long-term benefits. Appropriate uses would be open space and recreation. Developments already occurring in the floodplain should be encouraged to undertake appropriate procedures to minimize flood damage. Any higher density development must mitigate potential impacts, upstream and especially downstream. No development should be allowed which would raise the level of the 100-year flood. Surface runoff from areas that drain into streams should be controlled by measures which prevent erosion, and soil erosion during construction should likewise be carefully monitored and controlled. Since localized flooding may occur where immediate access to stream channels is not feasible for runoff, or if runoff is blocked by existing development projects, storm drainage improvements will be required.

An FW (Floodway) overlay is hereby created with the adoption of this Safety Element. The boundaries of the FW Zoning District shall correspond to the Floodway Boundaries on the approved Floodway Boundary and Floodway Maps produced by the Federal Emergency Management Administration.

No use, development or alteration of an FW overlay is allowed without prior City approval. Prior to granting approval to use, develop or alter land within an FW overlay area the City shall make findings that the proposed use, development or alteration of the floodway conforms to the City's Flood Damage Prevention Regulations (City Code Chapter 26) and applicable Federal (FEMA) regulations.

D. FIRE HAZARDS

A major natural hazard system to be considered for many northern California communities is wildland burning. The wildfire hazard is the consequence of three main factors:

- (1) A climatic pattern with long dry summers, clear skies with maximum solar radiation, high daytime summer temperatures, and extremely low relative humidities.
- (2) Vegetation communities which often have adapted to this seasonal drought by becoming fire tolerant (e.g., chaparral), and have high fuel loading.
- (3) Human settlement patterns which often are interspersed with areas of heavy vegetation/fuel accumulations along canyons, slopes, and foothill areas.

The City of Red Bluff is affected by the first of these factors but is only minimally affected by the last two. The main vegetation communities of the city are oak woodlands, valley grasslands, and riparian forest (see Conservation Element for a complete description of these types). Heavy concentrations of chaparral shrubs are rare, and the main vegetative cover is scattered oak trees with an understory of native and introduced herbaceous species of grasses and other non-woody plants. Riparian strips of denser tree growth with an understory of shrubs and scrub oak are sporadic along some of the major stream courses such as Reed's Creek.

A catastrophic wildfire has not affected Red Bluff in recent decades and the threat from one is small. The rapid response time of fire control units from the Red Bluff Fire Department has allowed containment of natural cover fires while they are still small. The number of natural cover fires (grass and brush) in 1990 was 51 (32.5%) out of a total of 157 fire response calls, a figure which is about the average for the 1986-1990 period.



When considering the wildland fire hazard, the primary environmental concern is the buildup of combustible material. Combustible fuels management is the most direct method of reducing the intensity, and thus the potential damage, of wildfires. The California Division of Forestry estimates the following fuel volumes for the vegetation communities of the Red Bluff area:

VEGETATION COMMUNITY	TONS OF FLAMMABLE FUEL/ACRE
1. Blue Oak Woodland	1.05 - 3.40
2. Open Chaparral Shrub	7.31 - 32.54
3. Closed Riparian Forest	27.19 - 35.00

(CDF, 1976)

The high fuel loading coupled with the long, dry summer season creates a peak fire hazard during late June to October. Other conditions which might serve to increase the fire hazard include slope and exposure, the nature of access roads, the distance from the main fire station, water availability, and competition for response by multiple calls for assistance. Additionally, the arrival of heavy fall to spring rainfall, while lowering the fire hazard during this period, can lead to heavier late spring vegetative growth which leads to an increased fire hazard by late summer - early fall.

An awareness of these conditions led to the enactment of a strong weed abatement ordinance in April, 1990 (City Ordinance 821 -- See Appendix A). This ordinance establishes effective measures for the control of flammable vegetation on open spaces within the city prior to June 1. Additional Weed Abatement Standards are followed for parcels of three acres and larger (Appendix). The Red Bluff Fire Department is in conformance with the California Fire Safe Regulations enumerated in Public Resources Code 4290.

Specific implementation recommendations by Fire Department officials relate to hydrant spacing, traffic flow in new subdivisions, and the need for appropriate sprinkler regulations for new developments. These have been integrated into section I.B of this element, and should be viewed alongside parallel recommendations included in the Land Use Element and the Open Space Element.

III. PUBLIC PROTECTION SERVICES

A. FIRE

The City of Red Bluff has one centrally located Fire Department and station which shares a facility with the Police Department in a Public Safety unit. The central location of the fire station is important in the provision of services to all parts of the city. Fire protection can be provided to most of the central and eastern parts of the city within 3 minutes, to the north part within 4 minutes, and to the south within 5-6 minutes. An average response

time for the entire urban area would fall between 3 and 4 minutes. The city employs eleven full-time fire control officials and can call upon an additional 30 fire-fighting and ancillary personnel to be rotated on duty. Fire-fighting personnel are involved in a year-round training program which involves all aspects of public safety. An active fire fighting trainee program to bring new personnel into the department has been maintained. The department has the following apparatus: four fire engines, one squad car, and two other support vehicles.

The Insurance Services Office (ISO) improved the rating of the department from class 5 to class 4 during the rating inspection of April, 1975. Since the department maintains in service three engine companies and one truck company, the number of required fire-fighters would need to be in the range of 22-24, given a recommended fire protection standard of 1.67 fire fighters per 1,000 people. Improvements since 1975 were made in the areas of increasing pumping capacity and rotating staff personnel. The most recent ISO inspection in September, 1990 resulted in an improvement in rating to class 3, a significant achievement for a department of this size. Should the department be increased in personnel to a level commensurate to increasing the rating to class 2, there would be a reduction of fire insurance rates by about 10% for commercial activities within the City of Red Bluff. A clear objective of the fire department is therefore to increase available fire fighters per shift to seven.

Additional qualified fire-fighter protection as well as consequent equipment needs will also be needed as Red Bluff continues to increase in population. If projected population reaches close to 15,000 by the year 2000, an additional 3-4 fire-fighters will be needed due to growth alone. Since population increase is most evident in new subdivisions to the far south-southwest and north of the city center of Red Bluff, the response time from the central fire station may be diminished due to distance, increased traffic loads on main arterials, and the need to traverse networks of secondary roads. Attention should be paid to the potential future need for a second fire station in the southern part of Red Bluff in order to plan for such a geographical pattern of city expansion. The present facility has served the city for nearly thirty years; however, there is an obvious shortage of space in the 7,000 square foot station complex, and this will become even more acute as new functions and personnel are added (Bryan and Murphy, 1991).

The department currently has mutual aid agreements with the Tehama County Rural Fire Department, the Gerber Fire Protection District, and the California Division of Forestry. The department and its personnel are also fully integrated into an "emergency operations plan" for all emergency responses. Total fire department responses to fires and emergencies is contained in the Appendix to this element.

Current fire department concerns relative to land use planning and future development projects within the urban area are addressed in the objectives and policies in section I.B, and relate to the following:

- (1) The provision of adequate water supplies, especially during times of peak demand, with water flows of 1,000 gal./min. in residential areas and 3,000 gal./min. for commercial areas. Hydrant spacing



should be 500 feet and 300 feet in residential and commercial areas respectively.

- (2) The adequate planning for fire-fighting capabilities in areal of critical facilities, e.g. at the airport, water for fire-fighting should be available to the end of each runway.
- (3) A regular and appropriate system of signing and addressing needs to be applied in all new subdivisions in order to ensure proper guidance of fire-fighting units.
- (4) Detailed maps of multiple-residence housing complex should be prepared in order that fire response can locate the affected dwelling unit.
- (5) A sprinkler ordinance should be considered in order to provide protection for new homes, and sprinkler systems should be mandated for commercial structures in excess of 8,000 square feet.

B. POLICE

The City of Red Bluff is staffed with 23 sworn officers and 11 ancillary staff members, for a total of 34 personnel. The Police Department operates out of the central Public Safety complex in the city center. The city owns and operates five marked patrol cars, one traffic enforcement car, three detective cars, two motorcycles, and one C.S.O. pick-up truck. The department shares vehicular maintenance functions with the Fire Department, which results in a savings to the city of expenses in this area.

Professional staff is assisted by six trained police reserve officers who assist sworn officers in such activities as: riding in patrol units, park supervision, and at special activities where large crowds are involved. This function is seen as critically important by the department which is continuing its recruitment, training, and award programs for this volunteer effort. The department has implemented or jointly participates in a total of 21 specialized law enforcement programs, including Neighborhood Watch, Secret Witness, Juvenile Services, Interagency Drug Enforcement, D.U.I. Checkpoints, Parking Enforcement, Animal Control, Gang Information, and Weapons Training, among others. The department participates in mutual aid agreements with the Tehama County Sheriff's Office and the California Highway Patrol. The department also benefits from the close proximity of police facilities of these two agencies to the Red Bluff urban area.

The police department, like the fire department, has an important role in emergencies. The primary role of the police department in a fire emergency is public safety and traffic control. Personnel in both departments have had training in advanced first aid and CPR. Additionally, two sworn officers are fully trained in hazardous materials response. Police personnel are fully integrated in the "emergency operations plan" and are prepared to respond to all types of incidents.

The location and function of Red Bluff have a special impact on police protection services. Red Bluff serves as the County Seat of Tehama County, and also is located at the junction of a major intercity highway (Highway 99)

and Interstate 5. These factors ensure a large daytime service function and traffic corridor problems that peak during the day but extend to a 24-hour basis. Departmental estimates indicate that the residential population of 12,900 is expanded to a daily service population of nearly 30,000 during peak times. The present sworn officer to population ratio of the Red Bluff Police Department is about 1.8 per 1,000 people. The ideal ratio, by department standards, would be to maintain a ratio of 2:1,000 people which, given the present population of the city alone would mean the addition of three sworn officers to the police force. Given the high daytime service population of the city, such calculations should be considered to be conservative.

C. HAZARDOUS MATERIALS

The City of Red Bluff has no high hazardous materials use facility such as oil refineries or chemical manufacturing plants. There are also no large storage facilities for hazardous materials such as chemicals, solvents, or fuels. "Hazardous Materials" covers a large number of substances that are an actual or potential danger to the public. These include heavy metals, toxic chemicals; flammable and/or explosive gases, liquids, and solids; corrosive materials, infectious substances, and radioactive materials. After domestic or commercial use many of these substances become "hazardous waste materials." The need to develop a rational planned approach to long term hazardous waste management became increasingly important after 1980. Partly in response to this concern, Assembly Bill 2948 was passed in 1986. This bill provided funding to California counties to prepare hazardous waste management plans.

Tehama County elected to prepare a County Hazardous Waste Management Plan (CHWMP) under the auspices of AB 2948. The Tehama County CHWMP complies with the California Department of Health Services' "Guidelines for the Preparation of Hazardous Waste Management Plan" (DHS, June 30, 1987). The plan was presented in September, 1988 and revised in January, 1989. The plan is currently used by Tehama County and its guidelines are relied upon by the City of Red Bluff for all aspects of its management of hazardous wastes. The Tehama CHWMP was the basis for the recommendations for "existing and proposed hazardous waste disposal" (Section IV B) of the Land Use Element. The specific guidelines of the CHWMP were enumerated therein.

The transportation of hazardous materials (and waste) within the City is a matter of public protection concern. The transportation of hazardous materials is largely regulated by federal and state agencies; however, an accident involving the spillage of hazardous materials becomes a county or city response need depending on the locality. The danger of such an occurrence relates directly to the presence of a major interstate highway and railroad line transecting the city. While these two transport lines are relatively straight and level, they represent areas involving high traffic congestion within city limits. The Tehama CHWMP suggests specific policies to review for adequacy of the inspection and licensing activities for vehicles used in the county, to periodically check manifest records to ensure that licensed haulers are being used, review county transportation routes to determine if there are roads on which hazardous substances or waste transport should be prohibited, ensure that vehicles that transport hazardous

materials for county agencies are in full compliance with state and federal law, and review adequacy of the County's monitoring (and agency procedures) for transporting hazardous materials and wastes. These policies can be adapted to city needs and the appropriate city ordinances can be adopted to conform with County policies and actions and to fit the needs of the people of Red Bluff.

D. EMERGENCY PREPAREDNESS

The public agencies of the City of Red Bluff were integrated into the Fire Department's "emergency operations plan" in August, 1991. This plan has integrated agency response to a variety of potential emergencies: Flood, Fire, Earthquake, Explosion, Snow Storm, Civil Disturbance, and Hazardous Material Spill. A stepwise procedure involving notification, Mutual Aid involvement, and appropriate agency and personnel response, is detailed for each potential emergency circumstance. A copy of this disaster plan is included in the Appendix to this element.

In addition, all fire-fighting personnel attend training sessions dealing with vehicle extrication procedures, hazardous materials handling, cardio-pulmonary resuscitation, and advanced first aid procedures. Police personnel are similarly trained, with two sworn officers fully trained in hazard management response. Both the Fire and Police Department feel comfortable with the level of emergency preparedness of their staffs, and with the recommendations for handling hazardous materials in the County's management plan. Both Public Safety agencies maintain Mutual Aid agreements with appropriate outside fire and police agencies, and emergency medical response personnel are on duty or on call at St. Elizabeth's Hospital, the City's major health provider.

The official Emergency Plan for the City of Red Bluff was written in May 1975, updated in 1977, and extended as current by the State of California Office of Emergency Services in 1981, with a need to update in 1984. The City Emergency Plan will need to be correlated with the "emergency operations plan" and fully updated to existing emergency, safety, and public health guidelines.

REFERENCES

- Bryan, Murphy Associates, City of Red Bluff 1991 Master Plan. San Ramon, California, May, 1991.
- California State University, Chico, Department of Geography and Planning, General Plan Elements: Land Use and Conservation. 1993.
- City of Red Bluff, Police Department. "1991 Annual Report and Statistical Review," March, 1992.
- City of Red Bluff, "City Disaster Plan," August 12, 1991.
- City of Red Bluff, Fire Department. 1990 Annual Report, March, 1991.
- City of Red Bluff, Office of Emergency Services "Emergency Plan," 1975 and 1981.
- Federal Emergency management Agency, Flood Boundary and Floodway Maps, City of Red Bluff, February, 1987.
- Federal Emergency Management Agency, "Flood Insurance Study - City of Red Bluff, California," March, 1986.
- Guyton and Scheel, Earthquake and Volcanic Hazards in Northeastern California, Chico, 1974.
- Lingenfelter, Keith. Usual and Unusual Weather at Red Bluff and Vicinity, Red Bluff, 1970.
- State of California, Department of Water Resources, Reeds Creek Flood Study, Sacramento, December, 1987.
- State of California, Department of Water Resources, Sacramento Valley Westside Tributary Watersheds Erosion Study: Reeds Creek Watershed, Sacramento, October, 1991.
- State of California, Division of Forestry, "Fire Control Notes," No. 37, September, 1976.
- State of California, Air Resources Board, "Climate of the Sacramento Valley Ar Basin," November, 1974.
- State of California, Department of Conservation, Division of Mines and Geology, "Fault-Rupture Hazard Zones in California," Special Publication 42, Revised 1990.
- State of California, Office of Planning and Research, "Hazardous Waste and Substances Sites List, Red Bluff, California," September, 1988.
- Tehama County, Hazardous Waste Management Plan, Volumes I and II, January, 1989.

Tehama County, Hazardous Waste Management Plan, Volumes I and II, September, 1988.

Tehama County, "Tri-County Area Planning Area, General Plan Elements: Safety, Seismic Safety, Noise, Scenic Highways," 1974.

United States Geological Survey, Geologic Map: Redding Sheet, 1969.

United States Geological Survey, "Preliminary Geological Map of the Red Bluff 100,000 Quadrangle, California," Open-File Map of 84-105, 1984.

United States Weather Bureau, Climatic Summary of the United States, Washington, D.C., 1964 and 1984.

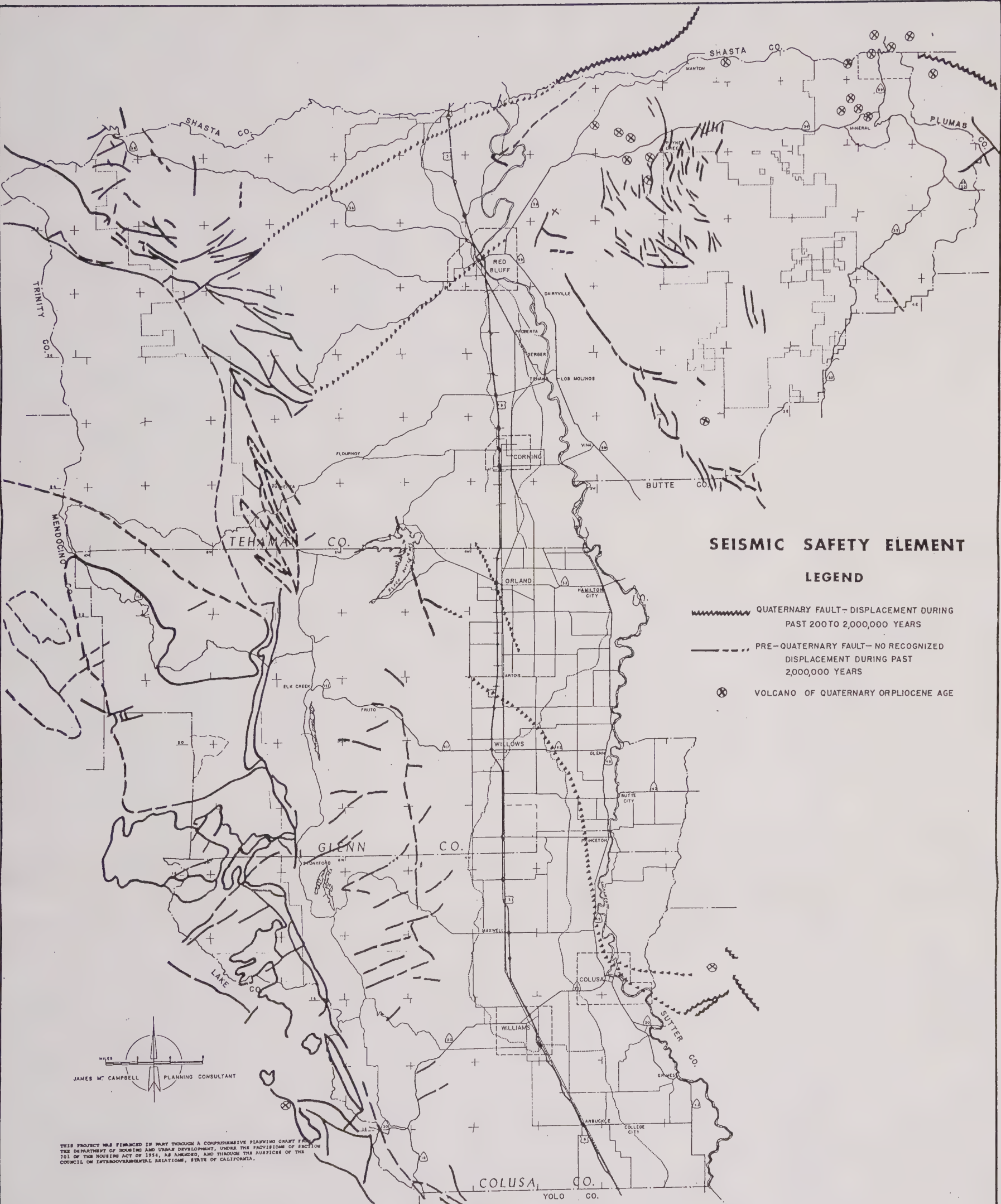
Warner, Richard (Ed.), California Riparian Systems, University of California Press, Berkeley, California, 1982.

1993 SAFETY ELEMENT

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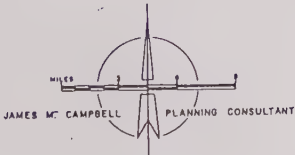
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SEISMIC SAFETY ELEMENT

LEGEND

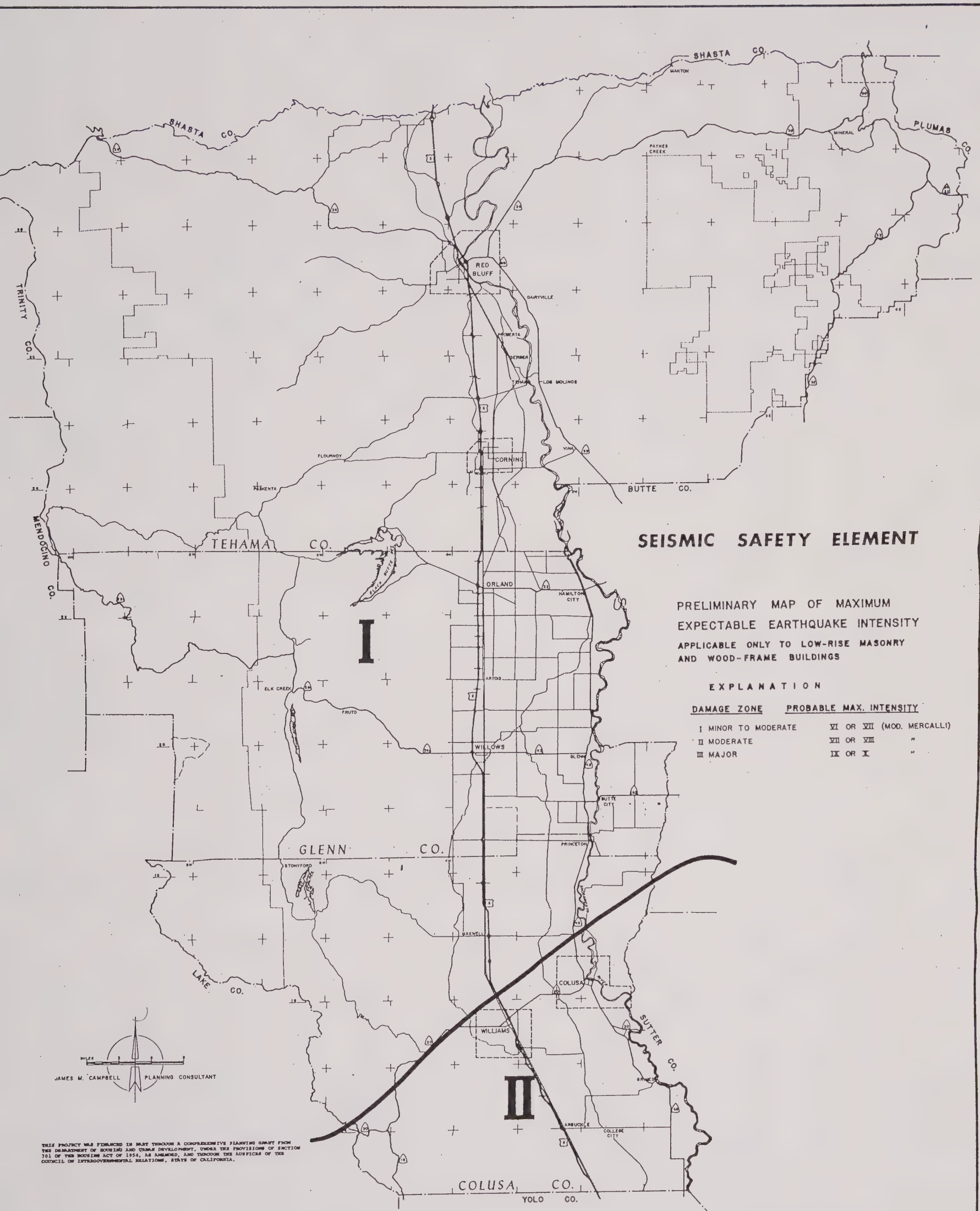
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-  PRE-QUATERNARY FAULT—NO RECOGNIZED DISPLACEMENT DURING PAST 2,000,000 YEARS
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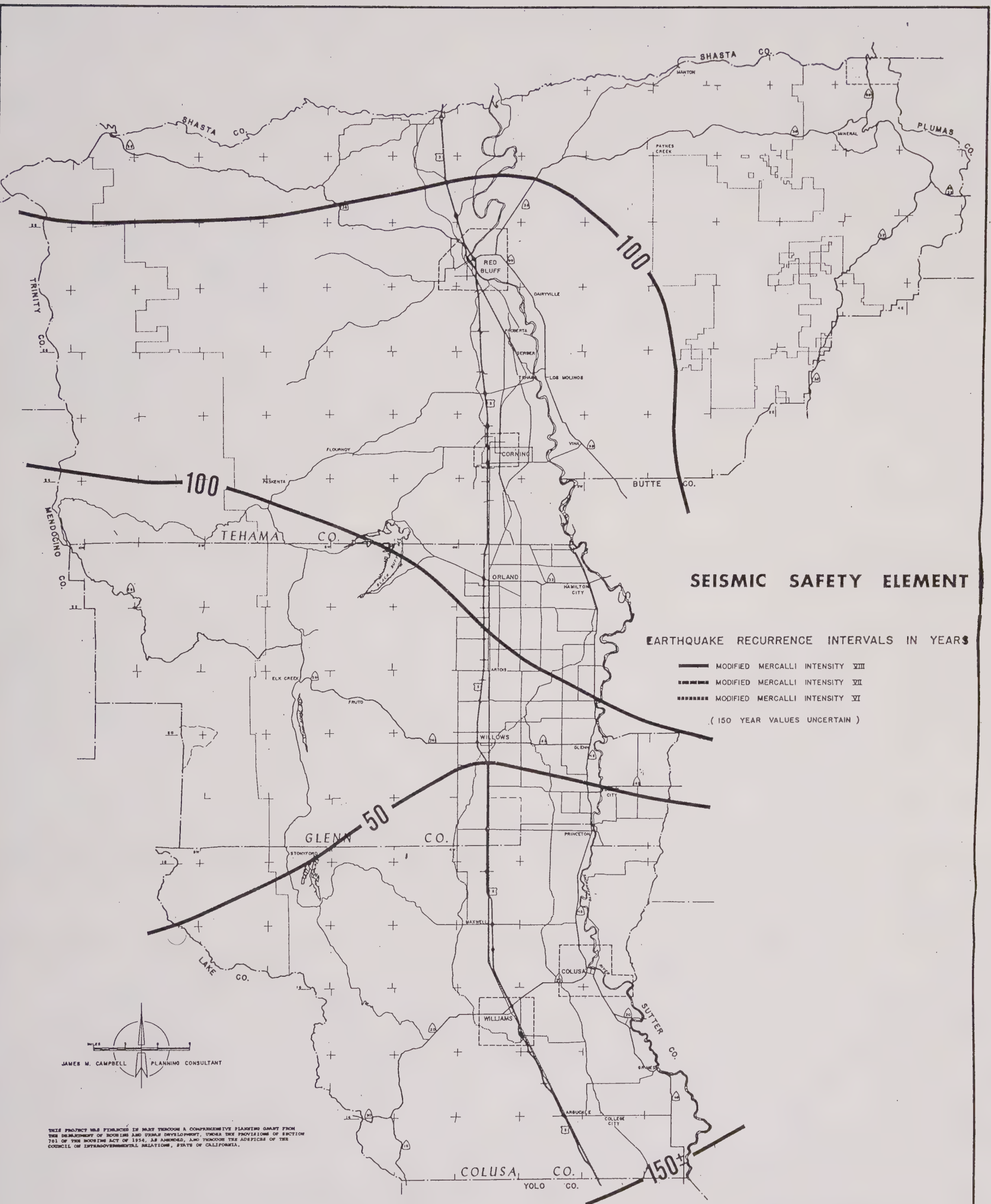
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TRI-COUNTY PLANNING AREA

GENERAL PLAN



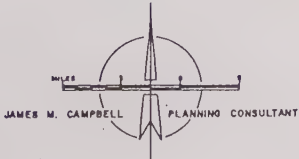
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SEISMIC SAFETY ELEMENT

EARTHQUAKE RECURRENCE INTERVALS IN YEARS

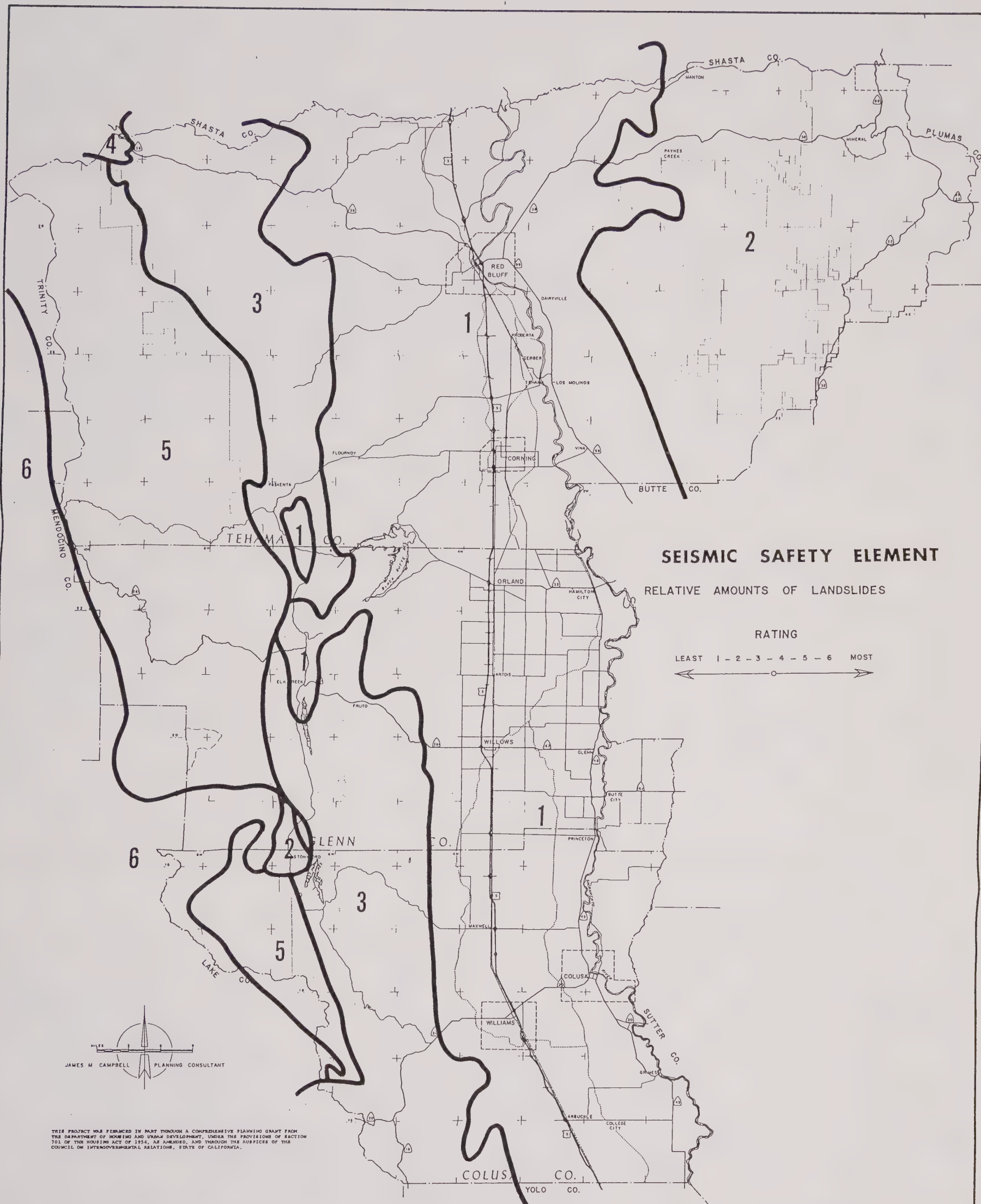
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 - MODIFIED MERCALLI INTENSITY VI
- (150 YEAR VALUES UNCERTAIN)

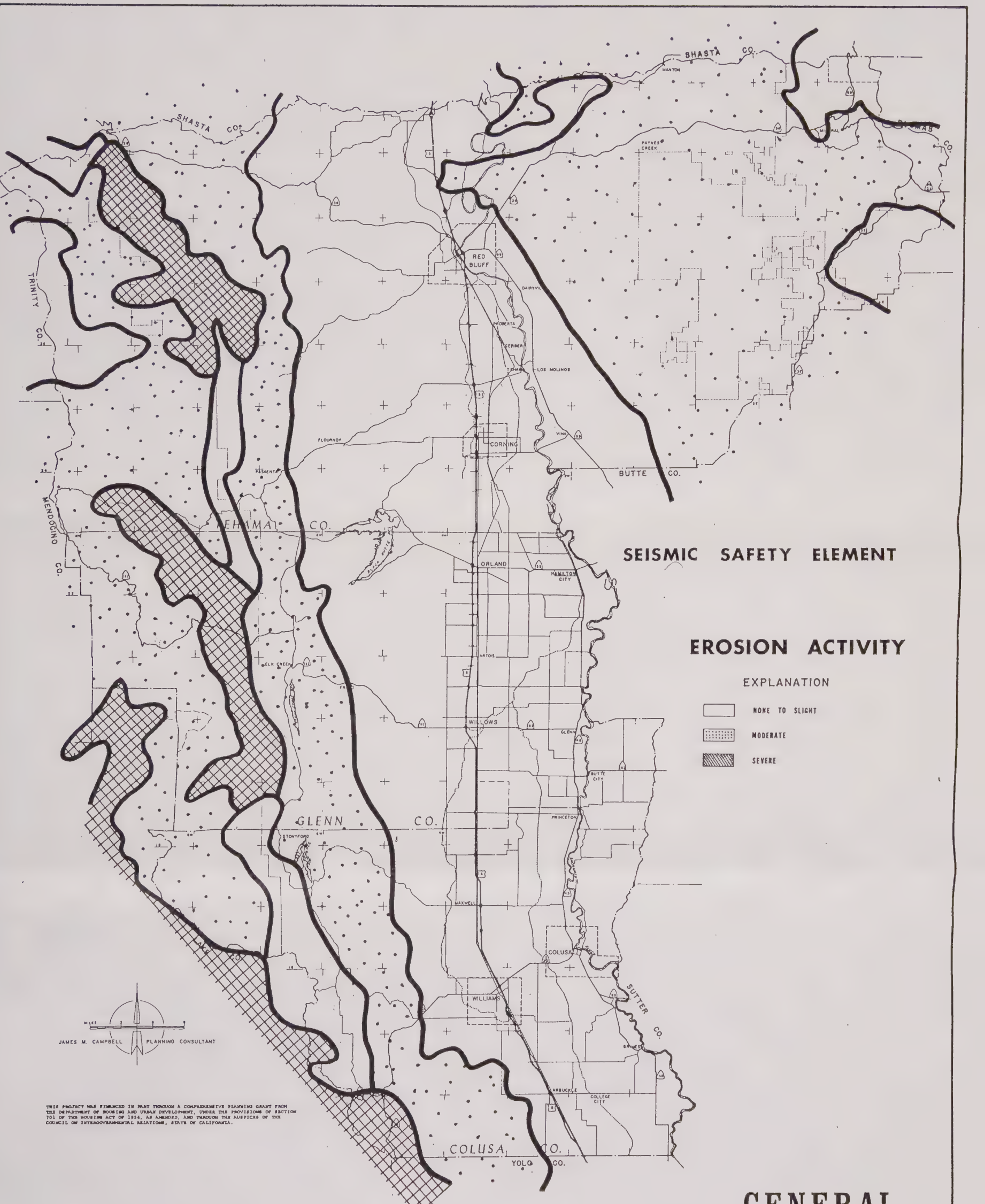


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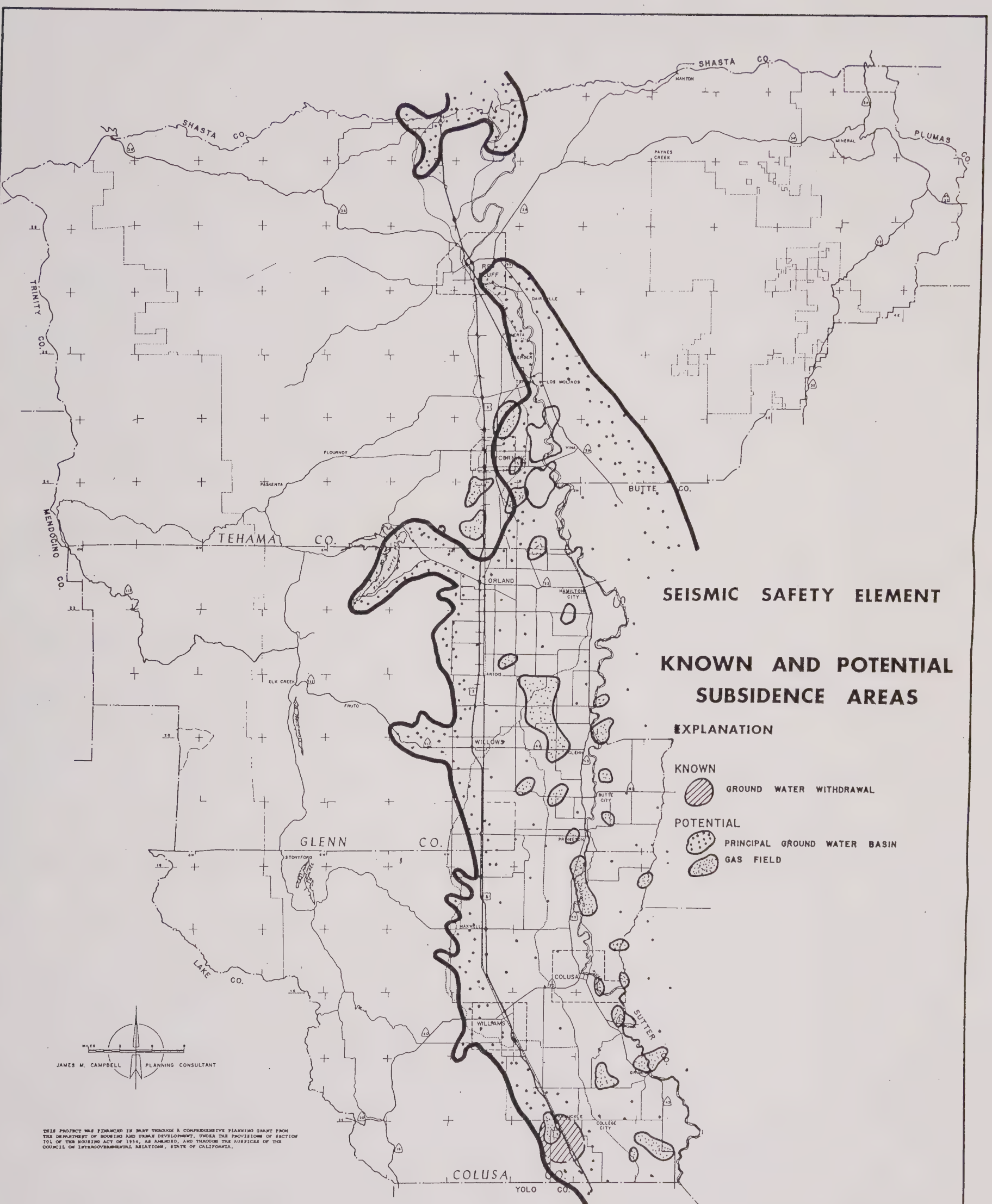
TRI-COUNTY PLANNING AREA

GENERAL PLAN

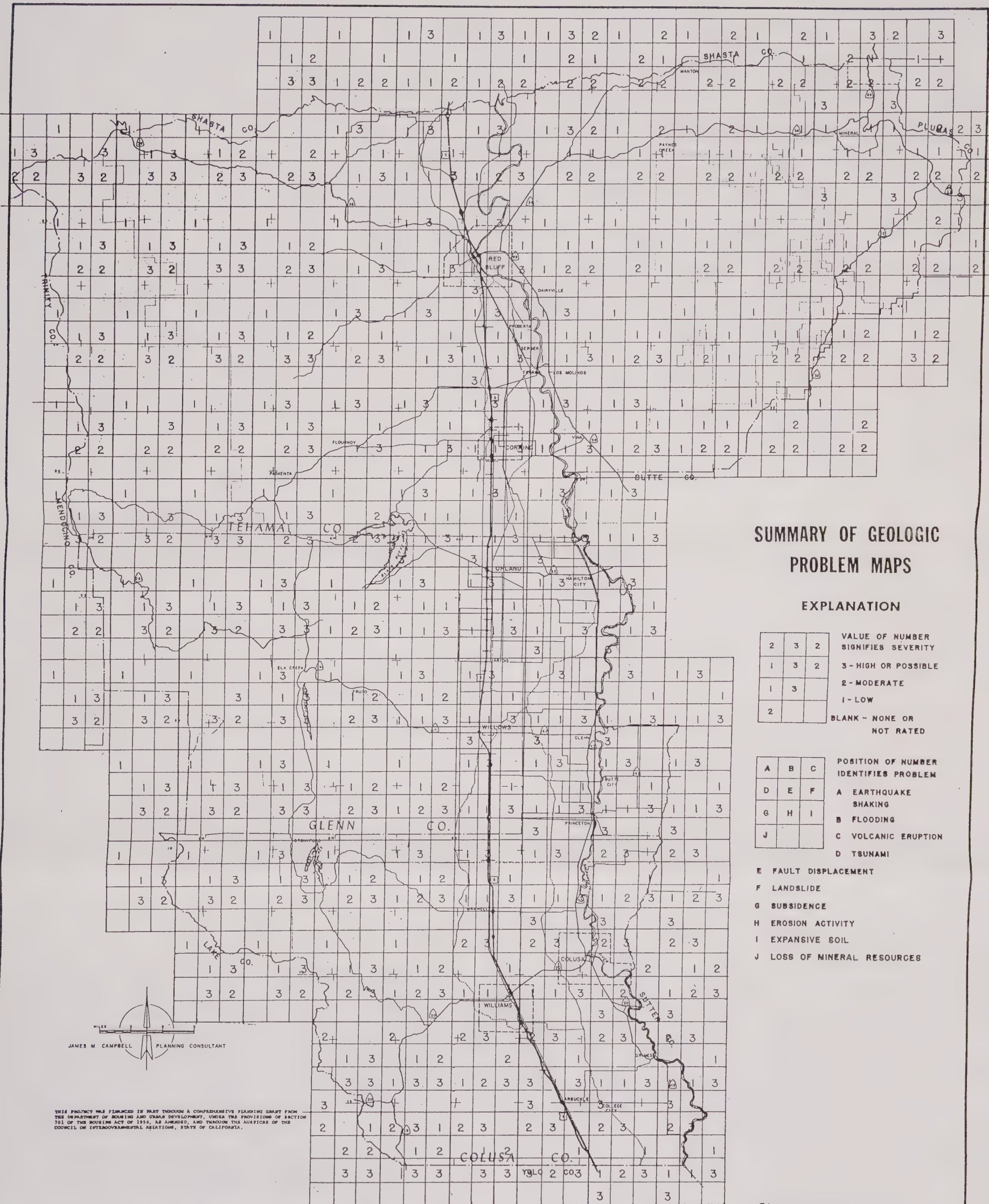




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TRI-COUNTY PLANNING AREA

GENERAL PLAN

SUMMARY TABLE RED BLUFF ZONING (DENSITY, BULK, PARKING, USE) REGULATIONS

4-14-93

THE REGULATIONS NOTED BELOW ARE SUBJECT TO PERIODIC CHANGE AND UPDATING.

THE TABLE BELOW IS AN ABBREVIATED VERSION OF PORTIONS OF CHAPTER 25 OF THE CITY CODE - SOME IMPORTANT PROVISIONS OF THE ZONING REGULATIONS HAVE BEEN OMITTED. C.E. HAYDEN

ZONE ① ③⑤	MIN. LOT AREA	MIN. LOT WIDTH	MAX. MAIN BLDG COV'G.	MIN. ② FRONT YARD SETBACK	MINIMUM SIDE YARD SETBACK ②	MIN. REAR YARD ②	MAXIMUM BUILDING HEIGHT ④	AUTO PARKING	USES ALLOWED	USES ALLOWED WITH A "USE PERMIT." U.P. ⑩	
R-1 SINGLE FAMILY RESIDENCE	⑦ 6,000 7,000 SQUARE FEET	60' ⑦	35% ⑦	25' ⑦	20% LOT WIDTH ⑤ 5 FT. MIN. ADD 3' FOR EACH STORY 10' MIN. ③	20' ⑦	35' FEET 2 1/2 STORIES	2 SPACES ③ 2 1/2 COVERED	ONE FAMILY DWELLINGS PRIVATE GARAGES, ACCESSORY BUILDINGS AND USES HOME OCCUPATIONS (SEE 25.29) 12 MAX. CHICKENS, RABBITS, ETC. NON COMMERCIAL BASIS UTILITY INSTALLATIONS ⑦	PARKS, PLAYGROUNDS, PUBLIC BUILDINGS SCHOOLS, DAY CARE CENTERS CHURCHES, GOLF COURSES, COUNTY CLUBS TEMPORARY REAL ESTATE, TRACT SALES, CONSTRUCT OFFICES AND EQUIPMENT YARDS COTTAGE DWELLINGS SEE 25.30-70	1. SEE 25.170-25.183 CITY CODE 2. SEE 25.181-25.182 3. S.S.Y.: STREET SIDE YARD 4. SEE 25.183 CITY CODE 5. CORD WIDTH @ FRONT YARD SETBACKS 6. 9'X18' SEE 25.33-1 SEE 25.181 7. PLANNING COMMISSION APPROVAL REQUIRED 8. D.U.: DWELLING UNIT 9. SCREENED PER U.P. USE PERMIT 10. CITY COUNCIL APPROVAL OF U.P. IS REQ'D
R-2 TWO FAMILY RESIDENCE	⑦ 6,000 7,000	60' ⑦	40% ⑦	25' ⑦	SAME AS R-1 DISTRICT	20' ⑦	35' FEET 2 1/2 STORIES	SAME AS R-1 FOR EACH D.U. ③	R-1 DISTRICT USES TWO FAMILY DWELLINGS	USES REQUIRING A USE PERMIT IN R-1 DISTRICTS	11. ALL OPERATIONS WITHIN AN ENCLOSED BLDG EXCEPT GAS, OIL, WATER AND AIR DISPENSING 12. SEE "USES ALLOWED WITH A USE PERMIT." 13. EMPLOYING NOT MORE THAN 5 PERSONS EXCLUDING SALES PERSONNEL 14. ALL BUILDINGS TO BE WITHIN IMAGINARY PLANE ABOVE PROPERTY LINE: a) 0-30' VERTICAL b) ABOVE 30' SLOPING INWARD ONE FT. HORIZONTAL TO TWO FT. VERTICAL 15. 12 FT IF ACCESSIBLE FROM STREET, ALLEY OR PARKING LOT BLDG MAY PROJECT INTO REAR YARD IF 14' ABOVE GROUND 16. SEE SEC. 25.182-M FOR YARD REQUIREMENTS FOR RES. USES THAT ARE APPROVED WITH A USE PERMIT. 17. CORNER LOTS 7,000 sq ft Lot width 70'
R-3 NEIGHBORHOOD APARTMENT DISTRICT	⑦ 6,000 7,000	60' ⑦	45% ⑦	20' ⑦	SAME AS R-1 DISTRICT	20' ⑦	35' FEET 2 1/2 STORIES	③ FOR EACH D.U. ③	USES PERMITTED IN R-1 AND R-2 DISTRICTS	PROFESSIONAL OFFICES FOR DOCTORS, ENGINEERS, ACCOUNTANTS, ARTISTS, ATTORNEYS, INSURANCE AGENTS, ETC. MEDICAL AND DENTAL CLINICS USES REQUIRING A U.P. IN R-1 DISTRICTS	
R-4 GENERAL APARTMENT	⑦ 6,000 7,000	60' ⑦	50% ⑦	20' ⑦	SAME AS R-1	20' ⑦	50' FEET 4 STORIES	2 SPACES PER D.U. ③ ③	R-1, R-2, R-3 DISTRICT USES PARKS, PLAYGROUNDS, PUBLIC BUILDINGS SCHOOLS, DAY CARE CENTERS CHURCHES BOARDING & LODGING HOUSING PRIVATE GARAGES & PARKING LOTS ③ ACCESSORY USE PER 25.89-f	MOTEL, HOTELS, HOSPITALS, MORTUARIES, REST HOMES MOBILE HOME PARKS ⑩	
C-1 NEIGHBORHOOD BUSINESS DISTRICT	NONE	NONE	NONE	15' ⑦	NONE	15' ⑦	NONE EXCEPT FOR R-4 USES: SAME AS R-4 OTHER USES: PARKING AREA EQUAL TO BUILDING AREA OR PER 25.100 AND FOR ALL OTHER USES PARKING AREA EQUAL TO BUILDING AREA	FOR R-4 USES: SAME AS R-4 OTHER USES: PARKING AREA EQUAL TO BUILDING AREA OR PER 25.100 LOADING AREA PER 25.107 ③	R DISTRICT USES EXCEPT D.U. ③ ⑫ RETAIL AND BUSINESS STORES: FOOD, BOOK, DRUG, FLOWER, VARIETY, HARDWARE, CLOTHING, ETC. AGENCIES AND SERVICES: LAUNDRY, SERVICE & SELF OPERATED BARBER & BEAUTY SHOPS SHOE, RADIO, APPLIANCE REPAIR PUBLIC BUILDINGS, PUBLIC UTILITY SUBSTATIONS AND OFFICES COMMERCIAL PARKING LOTS & GARAGES ACCESSORY USES PER 25.101-R ⑬ PROFESSIONAL OFFICES EXCLUDING MEDICAL AND DENTAL OFFICES	DWELLING UNITS SERVICE STATIONS ⑪ TIRE SALES AND SERVICE ⑪	
C-2 CENTRAL BUSINESS DISTRICT	NONE	NONE	NONE ⑭	NONE ⑭	NONE ⑭	12' ⑮	50' FEET 4 STORIES ⑭	PER CITY CODE SEC 25.111 BASED ON FLOOR AREA AND/OR SEATING ③	R AND C-1 DISTRICT USES ⑫ RETAIL STORES & SERVICES INCLUDING & SIMILAR TO: - BANKS, PROFESSIONAL OFFICES & CLINICS, BOWLING ALLEYS, FOOD, CLOTHING, PET, PHOTOGRAPHIC, AND GARDEN STORES, BAKERIES ⑮, NURSERIES, LAUNDRIES & DRYCLEANING SHOPS, PAWN SHOPS, UPHOLSTERY SHOPS, MORTUARIES - BUSINESS COLLEGES, MUSIC & DANCE STUDIOS - ART AND ANTIQUE SHOPS - BLUEPRINT, NEWSPAPER AND PRINT SHOPS - RESTAURANTS, CATERING SHOPS, BARS, DANCE HALLS - MOTELS, HOTELS PUBLIC UTILITY SUBSTATIONS & OFFICES ⑫ ACCESSORY USES PER 25.110-f & ⑬	DWELLINGS TRAVEL TRAILER PARKS ⑩ THEATERS, AUDITORIUMS, LODGE HALLS SOCIAL CLUBS MOTORCYCLE SALES AND SERVICE LIGHT EQUIPMENT RENTALS SERVICE STATIONS ABOVE GROUND WATER & FUEL STORAGE HALL	18. SEE SEC. 25.170 Parking and Loading Standards 19. SEE SECTION 25.170(a) 6
C-3 GENERAL COMMERCIAL DISTRICT	NONE	NONE	NONE	NONE ⑦	NONE	12' ⑮	50' FEET 4 STORIES ⑭	PER CITY CODE SEC 25.116 AND 25.111 ③	R, C-1 AND C-2 USES ⑫ GASOLINE SERVICE STATIONS ⑪, COMMERCIAL REPAIR GARAGES & INCIDENTAL SERVICE USES AUTO SALES & SERVICE WHOLESALE DISTRIBUTION, WAREHOUSES ALL OTHER COMMERCIAL USES EXCEPT THOSE SPECIFICALLY LISTED AS PERMITTED IN M-1 & M-2 DISTRICTS ACCESSORY USES PER 25.115-d ⑬	DWELLINGS TRAVEL TRAILER PARKS THEATERS, AUDITORIUMS, LODGE HALLS, SOCIAL CLUBS	

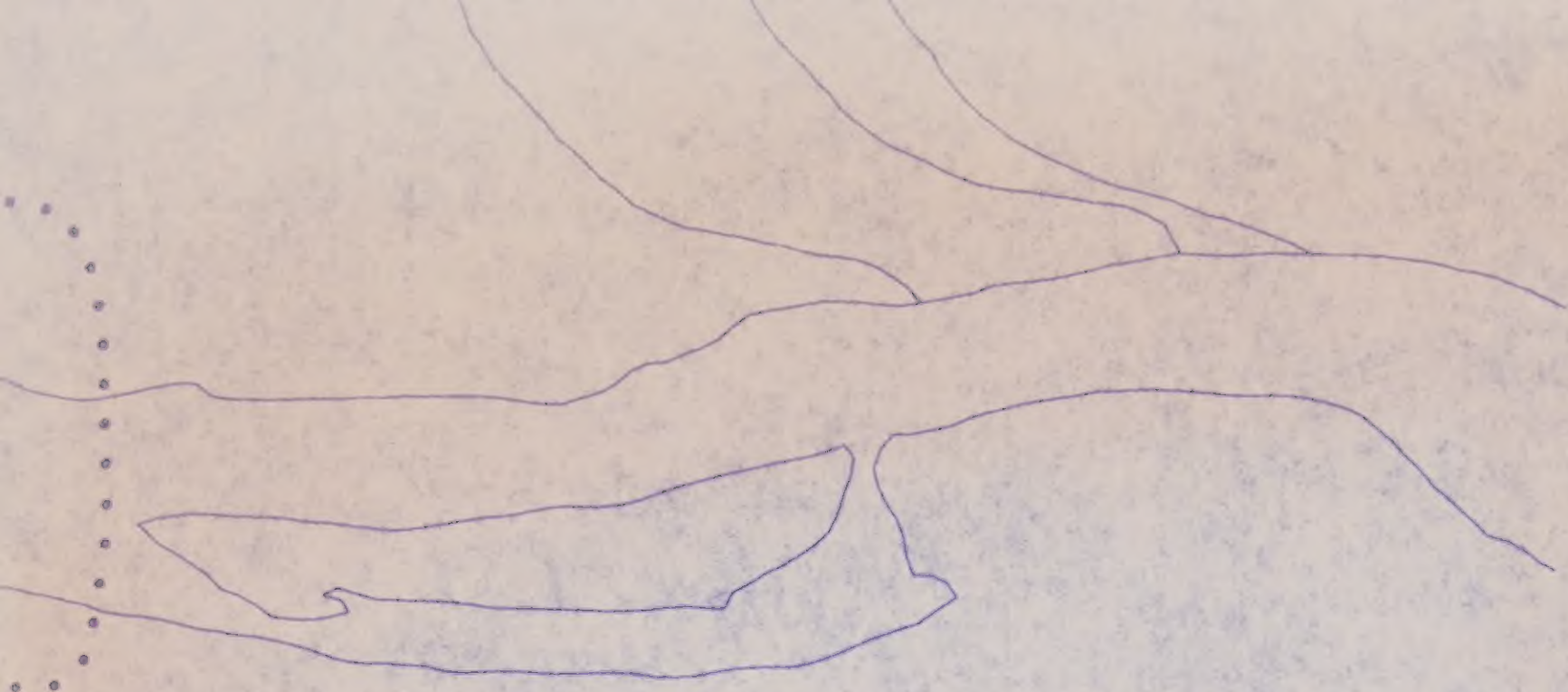
SUMMARY TABLE RED BLUFF ZONING (DENSITY, BULK, PARKING, USE) REGULATIONS

4-14-93

THE REGULATIONS NOTED BELOW ARE SUBJECT TO PERIODIC CHANGE AND UPDATING.

THE TABLE BELOW IS AN ABBREVIATED VERSION OF PORTIONS OF CHAPTER 25 OF THE CITY CODE - SOME IMPORTANT PROVISIONS OF THE ZONING REGULATIONS HAVE BEEN OMITTED. C.E. HAYDEN

ZONE (1) (25)	MIN. LOT AREA	MIN. LOT WIDTH	MAX. MAIN BLDG. CYRG	MIN. FRONT YARD	MINIMUM SIDE YARD SETBACK	MIN. REAR YARD	MAXIMUM BUILDING HEIGHT	AUTO PARKING AND LOADING	PERMITTED USES	USES PERMITTED WITH A USE PERMIT U.P.	
M-1 LIGHT INDUSTRIAL	NONE	NONE	NONE	NONE	NONE	NONE	SAME AS REQ'D FOR C-2 ZONES	SUFFICIENT FOR ALL CUSTOMERS AND EMPLOYEES LOADING: (20) (18)	USES PERMITTED IN C-3 DISTRICTS EXCEPT USES REQUIRING A USE PERMIT ASSEMBLY & STORAGE OF MATERIALS, LIQUID, EQUIPMENT, ETC. EXCEPT INFLAMMABLE, EXPLOSIVE OR WHICH CREATE DUST, ODORS, ETC. WHOLESALE & STORAGE WAREHOUSES FEED & FUEL YARDS MANUFACTURING, PROCESSING, FABRICATING, REFINING, REPAIRING, PACKAGING & TREATMENT INCLUDING: DYEING, DRY-CLEANING, RUG CLEANING PLANTS LAUNDRIES, VET. HOSPITALS, CABINET SHOPS CONSTRUCTION AND MATERIAL YARDS (EXCEPT ROCK, GRAVEL, CEMENT), THE FOLLOWING WITHIN A BUILDING OR ENCLOSED WITHIN 6 FT. SOLID FENCE/WALL APPROVED BY PLAN. COMM. AUTO. BODY & PAINT. SHOPS, AUTO WRECKING YARDS TRUCK TERMINALS, SHEET METAL & WELDING SHOPS RETAIL LUMBER YARDS, COMMERCIAL KENNELS COOPERAGE & BOTTLE WORKS		20. PRIVATE OFF-STREET SPACE FOR HANDLING ALL MATERIAL AND EQUIPMENT 21. SEE LIMITATIONS IN SECTION 25.164-A-2 22. SEE CITY CODE SEC. 25.149-1, 23 FOR SPECIAL RESTRICTIONS AND REQUIREMENTS IN A "P-2" DISTRICT 23. SEE CITY CODE SEC. 25.159-161 FOR SPECIAL RESTRICTIONS AND REQUIREMENTS 24. NO SUCH ZONES HAVE YET BEEN ESTABLISHED THEY ARE NOT FOUND ON THE ZONING MAP 25. THE FOLLOWING ZONES HAVE NOT BEEN ESTABLISHED IN THE CITY. NO SUCH ZONES EXIST ON THE ZONING MAP.
M-2 GENERAL INDUSTRIAL	NONE	NONE	NONE	NONE	NONE	NONE	SAME AS REQUIRED FOR C-2 ZONES	SAME AS REQ'D FOR M-1 ZONES (18)	USES PERMITTED IN M-1 DISTRICTS WHOLESALE LUMBER YARDS, LUMBER MILLS, CONCRETE BATCH PLANTS, INDUSTRIAL POTTERY MILLS AND INDUSTRIAL WORKS BLACKSMITH SHOPS, CASTING FOUNDRIES SEWAGE TREATMENT PLANTS THE FOLLOWING WHEN ENCLOSED WITHIN 6' SOLID FENCE OR WALL APPROVED BY PLAN. COMM. BUILDING MATERIAL & CONTRACTORS STORAGE YARD JUNKYARD	LAWFUL USES NOT OTHERWISE PROVIDED FOR IN THE ZONING CHAPTER (25) OF THE CITY CODE	26.
M-L LIMITED INDUSTRIAL	10,000 SQUARE FEET	NONE	NONE	20'	20'	20'	40'	(18) LOADING: ONE SPACE PLUS AREA NEEDED TO HANDLE ALL TRUCKING OPERATIONS	COMMERCIAL & PROFESSIONAL OFFICES RESEARCH INSTITUTES AND LABORATORIES, SMALL ELECTRONICS & PLASTIC WORKS MANUFACT. ELECTRICAL PRODUCTS & INSTRUMENT MANUFACT. BOOKBINDING, PRINTING, LITHOGRAPHY, CARTO- GRAPHY, CUTTING AND FINISHING, GARNET & PAPER PRODUCTS MANUFACTURING UNDERGROUND & ABOVE GROUND UTILITY INSTALLA- TIONS FOR LOCAL USE	SUBSTATIONS, GENERATING PLANTS, GAS HOLDERS	
P-I PLANNED INDUSTRIAL (22)		100' STREET FRONTAGE		30'	10'	10'	50'	LOADING PER 25.149-2F (18)	SOME M-L USES PER 25.143-2-a SOME M-1 USES PER 25.142-2-b SOME M-2 USES PER 25.142-2-c SOME AV USES PER 25.143-2-d WHOLESALE & RETAIL STORES, ASSEMBLY PLANTS, PHOTOGRAPHIC PROCESSING, UPHOLSTERY, BOTTLING WORKS, ELECTRICAL/PLUMBING/HEATING & A.C. SHOPS, RESTAURANTS, MANUFACTURE & SALE OF ANIMAL ACCESSORIES	INDIVIDUAL RESIDENCES IF INCIDENTAL TO PERMITTED OPERATION	
AV AIRPORT (23)								(18)	DRY CROP FARMING	DWELLINGS, AIRCRAFT HANGARS & SERVICE/REPAIR/REFUELING FACILITIES, AIRPORT, WEATHER & SAFETY FACILITIES, PUBLIC RECREATION/SERVICE/INSTITUTION CONCESSIONS & INDUSTRIAL USES COMPA- TIBLE WITH AIRPORT AND MASTER PLAN	
COMBINING DISTRICTS:							SEE CITY CODE SECTIONS:				
A AGRICULTURAL COMBINING							25.162 THRU 25.165				
B											
F SPECIAL HIGHWAY FRONTAGE							25.168 THRU 25.169				
H							25.174 THRU 25.175				
MHOA MOBILE HOME COMBIN AREA SUBDIVISION							25.240 THRU 25.249				
N CIRCULAR COUNTRY							25.161-A THRU 25.161-B3				
P											
PD PLANNED DEVELOPMENT (USE PERMIT)							25.150 THRU 25.158.1				



AREA IN SQUARE MILES

City Limits (Incorporated Area)	7.5
Sphere of Influence	13.1
Planning Area	20.0



Scale 1 inch = 1000 feet

CSU Chico

Geography Department

MAY 10, 1993

File: Land1000.sml

Page No. 1 of 2

Oversized Map or Foldout not scanned.

Item may be viewed at the
Institute of Governmental Studies Library, UC Berkeley.

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WEED ABATEMENT STANDARDS

The following standards are considered as a minimum. The fire department may require additional abatement because of terrain, height of growth, location, brush, use of land, etc. **ABATEMENT BY OPEN BURNING IS NOT PERMITTED.**

Weeds, grass, or combustible growth can be abated by mowing, scraping, or disking. If mowed, the height cannot be more than four (4) inches above the ground.

WEEDS, GRASS, AND COMBUSTIBLE GROWTH

1. Land areas three (3) acres or larger:
 - (A) A cleared space around all buildings - 30 feet wide a minimum.
 - (B) A cleared space (fire break) 10 feet wide completely around the perimeter of the property to the street or sidewalk and 10 feet wide crossbreaks (cleared space) every 30 feet so the area within shall not exceed 900 square feet.
 - (C) A cleared space extending at least 15 feet beyond the foliage of any group of trees.
2. Land areas of less than three (3) acres:
 - (A) Complete abatement. All weeds, grass, or other growth that could be expected to burn when dry must be mowed or removed from the ENTIRE PARCEL.

RUBBISH, TRASH, OTHER UNSAFE CONDITIONS

1. ALL PROPERTIES
 - (A) All rubbish, trash, trimmings, or litter shall be abated.
 - (B) All woods, fuel or lumber shall be neatly stacked or removed from the property.
 - (C) All weeds, grass or other combustible growth shall be cleared at least 10 feet from around combustible storage.

The Red Bluff Fire Department shall check all properties abated to determine if abatement meets our requirements.

If you have any questions regarding what should be done to a parcel, please call the Fire Department at 527-1126 between 8:00 a.m. and 5:00 p.m. Monday through Friday.



C124920029

RETURN TO:

LOAN PERIOD	1	2	3
Home Use			
	4	5	6

ALL BOOKS MAY BE RECALLED AFTER 7 DAYS.

DUE AS STAMPED BELOW.

U.C. BERKELEY U.C. BERKELEY SENT ON ILL		
NOV 09 2006		
NOV 09 2006		
1 MONTH LOAN U.C. BERKELEY SENT ON ILL		
NOV 09 2006		
1 MONTH LOAN		

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 UNIVERSITY OF CALIFORNIA, BERKELEY
 Berkeley, California 94720-6000